STR-GX59ES/GX69ES

SERVICE MANUAL

US Model
Canadian Model

Since models STR-GX59ES / GX69ES are almost the same as STR-GX57ES / GX67ES, please use the service manual for STR-GX57ES / GX67ES.
This describes only the parts that differ from those of STR-GX57ES / GX67ES.

EXPLODED VIEWS

STR-GX57ES

Ref. No.	Part No.	Description
5	1-465-812-11	COMMANDER, STANDARD TYPE
6	3-707-584-01	COVER , BATTERY
54	A-4323-936-A	PANEL ASSY, FRONT
103 *	A-4341-921-A	SUB AMP BOARD, COMPLETE
104 *	A-4341-917-A	VIDEO BOARD, COMPLETE
158 *	4-944-549-21	PANEL, BACK (US)
158 *	4-944-549-31	PANEL, BACK (Canadian)
160 *	1-640-126-11	SUR SPEAKER (B) BOARD
F971	1-532-746-11	FUSE, GLASS TUBE 4A 125V
F972	1-532-746-11	FUSE, GLASS TUBE 4A 125V

STR-GX59ES

Ref. No.	Part No.	Description
5	1-693-099-11	COMMANDER, STANDARD (RM-U221)
6	4-925-079-01	COVER (6), BATTERY
54	A-4325-601-A	PANEL ASSY, FRONT
103 *	A-4341-907-A	SUB AMP BOARD, COMPLETE(Refer to GX67ES)
104 *	A-4347-564-A	VIDEO BOARD, COMPLETE
158 *	4-944-549-41	PANEL, BACK
160 *	1-640-125-11	SUR SPEAKER (A) BOARD (Refer to GX67ES)
F971	1-532-747-11	FUSE, GLASS TUBE 5A 125V
F972	1-532-747-11	FUSE, GLASS TUBE 5A 125V

ELECTRICAL PARTS LIST

STR-GX57ES

VIDEO BOARD
****

Ref. No.	Part No.	Description
R615		----------
R616	1-249-441-11	CARBON 100K 5% 1/4W
TM601	1-537-238-11	TERMINAL BOARD

ACCESSORIES & PACKING MATERIALS
****

	3-753-169-21	MANUAL, INSTRUCTION (ENGLISH)
	3-753-169-31	MANUAL, INSTRUCTION (FRENCH)
*	4-945-640-01	INDIVIDUAL CARTON

STR-GX59ES

VIDEO BOARD
****

Ref. No.	Part No.	Description
R615	1-249-425-11	CARBON 4.7K 5% 1/4W (Refer to GX67ES)
R616	1-249-413-11	CARBON 470 5% 1/4W (Refer to GX67ES)
TM601	1-536-706-00	TERMINAL BOARD (SP)

ACCESSORIES & PACKING MATERIALS
****

	3-755-037-21	MANUAL, INSTRUCTION (ENGLISH)
	3-755-037-31	MANUAL, INSTRUCTION (FRENCH)
*	4-952-784-01	INDIVIDUAL CARTON

FM STEREO / FM - AM RECEIVER

SONY®

STR-GX67ES			STR-GX69ES		
EXPLODED VIEWS					
Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
5	1-465-811-11	COMMANDER, STANDARD TYPE	5	1-693-098-11	COMMANDER, STANDARD (RM-P321)
54	A-4323-934-A	PANEL ASSY, FRONT	54	A-4325-785-A	PANEL ASSY, FRONT
158 *	4-944-549-01	PANEL, BACK (US)	158 *	4-944-549-51	PANEL, BACK
158 *	4-944-549-11	PANEL, BACK (Canadian)			
ELECTRICAL PARTS LIST					
Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
		ACCESSORIES & PACKING MATERIALS **********			ACCESSORIES & PACKING MATERIALS **********
	3-753-169-21	MANUAL, INSTRUCTION (ENGLISH)		3-755-037-21	MANUAL, INSTRUCTION (ENGLISH)
	3-753-169-31	MANUAL, INSTRUCTION (FRENCH)		3-755-037-31	MANUAL, INSTRUCTION (FRENCH)
*	4-945-639-01	INDIVIDUAL CARTON	*	4-952-785-01	INDIVIDUAL CARTON

9-957-075-11

Sony Corporation
Audio Group

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STR-GX57ES/GX67ES

SERVICE MANUAL

US Model
Canadian Model

SPECIFICATIONS

Audio Power Specifications

POWER OUTPUT AND TOTAL HARMONIC DISTORTION

With 8-ohm load, both channels driven, from 20 - 20,000 Hz, rated 100 watts (STR-GX67ES) or 80 watts (STR-GX57ES) per channel minimum RMS power, with no more than 0.08% total harmonic distortion from 250 milliwatts to rated output.

Other Specifications

Amplifier section

Dynamic power output

STR-GX57ES
- 115 watts + 115 watts (8 ohms, at 1 kHz IHF)
- 170 watts + 170 watts (4 ohms, at 1 kHz IHF)
- 220 watts + 220 watts (2 ohms, at 1 kHz IHF)

STR-GX67ES
- 155 watts + 155 watts (8 ohms, at 1 kHz IHF)
- 240 watts + 240 watts (4 ohms, at 1 kHz IHF)
- 275 watts + 275 watts (2 ohms, at 1 kHz IHF)

Power output of center amplifier (STR-GX67ES only)
- 25 watts + 25 watts (8ohms at 1 kHz)

Power output of rear amplifier
- 25 watts + 25 watts (8ohms at 1 kHz)

Harmonic distortion
- Less than 0.08% at rated output

Frequency response
- PHONO: RIAA equalization curve ±0.5 dB
- CD, DAT, TAPE, VIDEO 1, 2 (AUDIO), TAPE MONITOR: 5 Hz - 50 kHz $^{+0}_{-1}$ dB

Residual noise: Less than 70 µV (8 ohms, network A)

Damping factor: 50 (8 ohms, 1 kHz)

Inputs

	Sensitivity	Impedance	S/N (weighting network, input level)
PHONO	2.5 mV	50 kilohms	87 dB 79 dB* (A, 2.5 mV)
CD, VIDEO (1), 2 TAPE, DAT TAPE MONITOR	150 mV	50 kilohms	105 dB 86 dB* (A, 150 mV)

* '78 IHF

Outputs
- VIDEO (1) AUDIO OUT
- REC OUT
  - Voltage 150 mV
  - Impedance 10 kiloohms
- SPEAKER A, B
  - Accepts speakers of 4 — 16 ohms.
- HEADPHONES
  - Accepts low and high impedance headphones.
- CENTER OUT, REAR OUT
  - 2.5 V, 1 kilohm
- PRE OUT
  - 1 V, 1kilohm

Video inputs: VIDEO 1, 2: 1 Vp-p, 75 ohms

Video outputs: VIDEO 1, MONITOR: 1 Vp-p, 75 ohms

Tone controls: BASS: ±8 dB at 100 Hz; TREBLE: ±8 dB at 10 kHz

Muting: –20 dB

— Continued on page 2 —

使用時は添付資料も参照のこと
Refer to the additional documents.

FM STEREO/FM-AM RECEIVER

SONY®

FM/AM tuner section

	FM tuner section	AM tuner section
Tuning	87.5 — 108 MHz	530 — 1,710 kHz (with the AM tuning interval set at 10 kHz) 531 — 1,710 kHz (with the AM tuning interval set at 9 kHz)
Antenna	300 ohms,balanced 75 ohms, unbalanced	External antenna terminal, loop antenna
Intermediate frequency	10.7 MHz	450 kHz
Sensitivity at 50 dB quieting	18.3 dBf, 4.5 µV (mono) 38.3 dBf, 45 µV (stereo)	—
Usable sensitivity	11.2 dBf, 2 µV (IHF)	Loop antenna: 50 dB/m (at 1,000 kHz) External antenna: 100µV (at 1,000 kHz)
Signal-to-noise ratio	82 dB (mono) 76 dB (stereo)	54 dB (at 50 mV/m)
Harmonic distortion	0.1% (mono), 0.2% (stereo) at 1 kHz	0.3% (at 50 mV/m, 400 Hz)
Selectivity	60 dB at 400 kHz	40 dB at 10 kHz 35 dB at 9 kHz
Separation	45 dB at 1 kHz	
Frequency response	30 Hz — 15 kHz $^{+0.5}_{-1.5}$ dB	
IM distortion	0.1% (mono) 0.2% (stereo)	
Capture ratio	1.2 dB	
AM suppression ratio	54 dB	
Image response ratio	80 dB	
IF response ratio	90 dB	
Spurious response ratio	100 dB	
RF Intermodulation	65 dB (800 kHz)	
Auto tuning threshold	30 dBf	

General

System — Tuner section: PLL quartz-locked digital synthesizer system
Preamplifier section: low-noise NF type equalizer amp
Power amplifier section: pure-complementary SEPP

Power requirements — 120 V AC, 60 Hz

Power consumption

	USA model	Canadian model
STR-GX67ES	250 watts	540 VA
STR-GX57ES	170 watts	420 VA

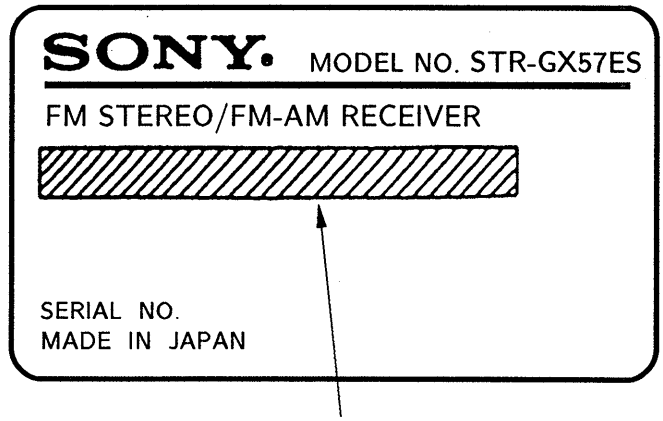
AC outlets — Two switched (total 120 W/1 A)
Dimensions — Approx. 430 x 150 x 375 mm (w/h/d) (17 x 5 $^{7}/_{8}$ x 14 $^{3}/_{4}$ inches) including projecting parts and controls
Weight — STR-GX67ES: Approx. 13.5 kg (29 lb 13 oz)
STR-GX57ES: Approx. 12.5 kg (27 lb 9 oz)

Accessories supplied — FM ribbon antenna (1)
AM loop antenna (1)
Remote Commander (1)
RM-U313 (STR-GX67ES)
RM-P213 (STR-GX57ES)
Sony batteries SUM-3(NS) (for the remote commander) (2)

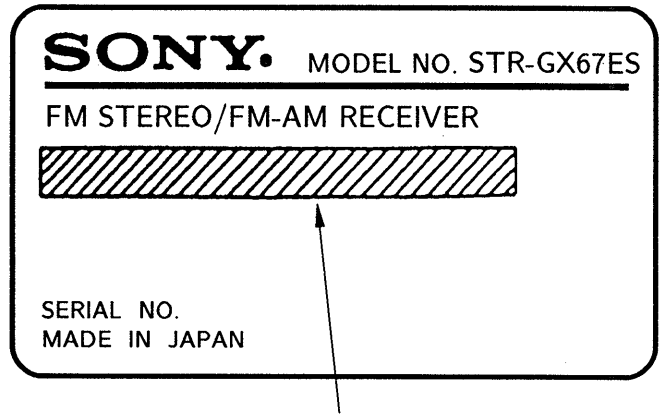
Design and specifications subject to change without notice.

MODEL IDENTICATION

- Specification Label -



US Model : AC 120V 60Hz 190W
Canadian Model : AC 120V 60Hz 420VA



US Model : AC 120V 60Hz 250W
Canadian Model : AC 120V 60Hz 540VA

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SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SAFETY CHECK-OUT (US Model)

After correcting the original service problem, perform the following safety check before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

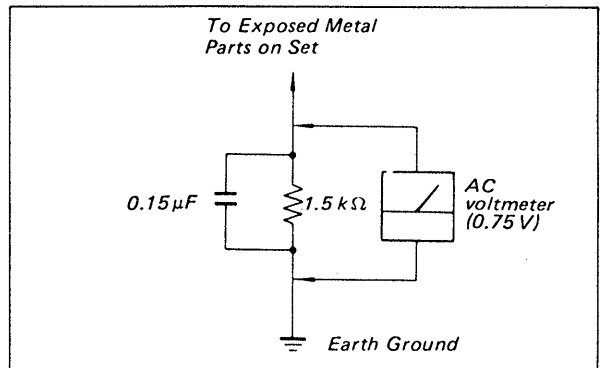


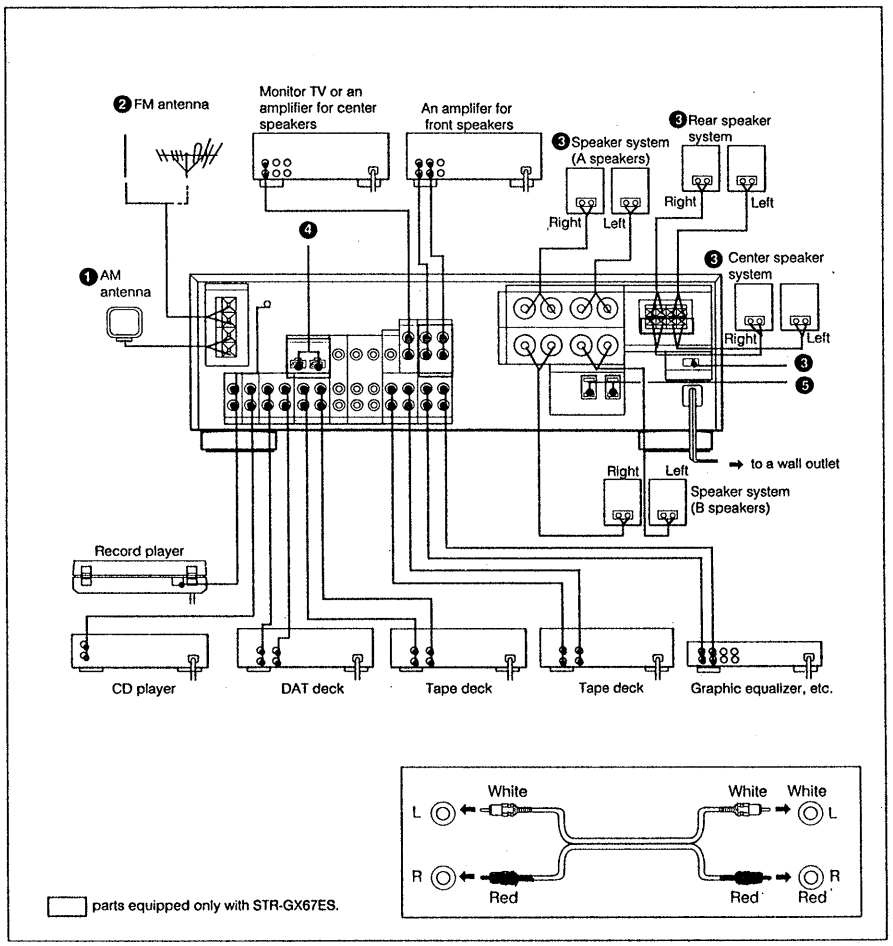
Fig. A. Using an AC voltmeter to check AC leakage.

Connecting the System

Notes on Connection

- The power cord should be connected last of all, after making sure that the POWER switch is turned off.
- The cable connectors should be fully inserted into the jacks. A loose connection may cause hum and noise.
- Cord plugs and jacks are color coded. The red plugs and jacks are to be connected to the right channel(R) and white ones to the left-channel(L).

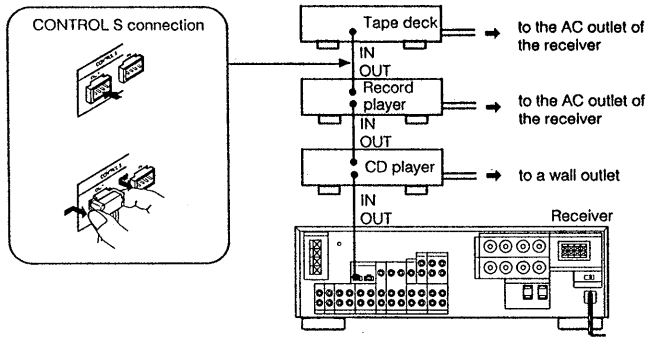
Audio Connection Diagram



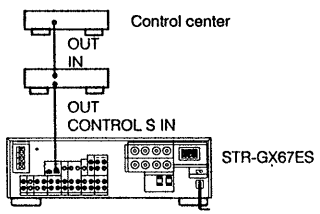
❹ Connecting the Remote Control System (STR-GX67ES only)

To control the equipment connected to the receiver with the remote commander
Connect the CONTROL S OUT connector and the CONTROL S IN connector of each piece of equipment as illustrated.

Connection example

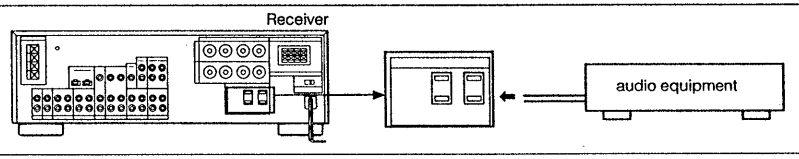


To control this receiver with the remote commander of the other equipment



Note on the CONTROL-S IN connection
To remote control this unit (used as a tuner) through another component, connect the CONTROL-S IN on this unit to the CONTROL-S OUT on a Sony equipment, with a CONTROL-S cable. When this connection is made, only remote commands sent through the CONTROL-S IN connector will be executed. Note that the remote sensor on this unit will not function.

❺ Using AC outlets



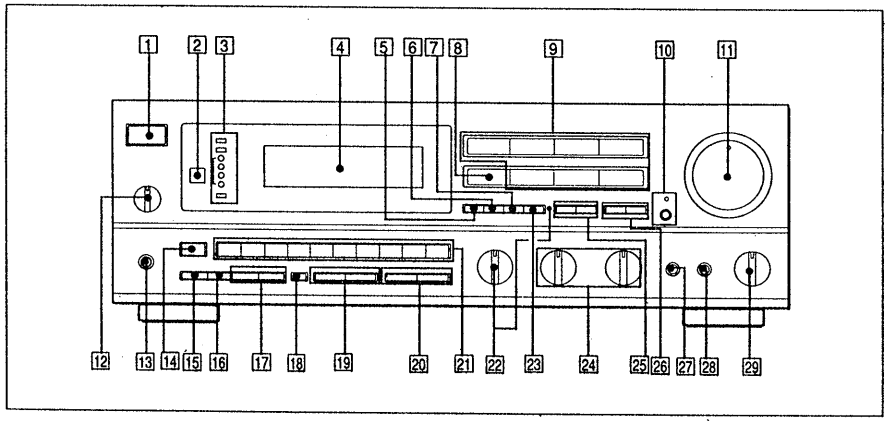
Connect the AC power cord of each piece of equipment to the AC outlet on the receiver so that you can turn the equipment on and off using the receiver's POWER switch.

Caution
Be careful that the total power consumption of each piece of equipment connected to the outlets on the receiver does not exceed 120 watts/1 A Max..
Do not connect electrical home appliances such as an electric iron, fan, TV, or other high-wattage equipment to these outlets.

This section is extracted from instruction manual.

Parts Identification

Front Panel



1 **POWER switch**

2 **Remote control sensor**

3 **Surround, DOLBY PRO LOGIC MODE and TAPE MONITOR indicators**

4 **Display window**

5 **SURROUND ON/OFF button** (page 22 and 23)

6 **SURROUND MODE button** (page 22 and 23)

7 **PRO LOGIC MODE button** (page 22 and 23)

8 **TAPE MONITOR switch** (page 18)

9 **Function selectors**

10 **MUTING button and indicator** (page 14)

11 **ATTENUATOR and indicator** (page 14)

12 **SPEAKERS selector** (page 9)

13 **HEADPHONES jack**

14 **SHIFT button** (page 16 and 17)

15 **FM MODE button** (page 15)

16 **FM TUNE MODE switch** (page 15 and 16)

17 **BAND selectors** (page 15 and 16)

18 **MEMORY button** (page 16)

19 **TUNING –/+ buttons** (page 15 and 16)

20 **PRESET TUNING –/+ buttons** (page 17)

21 **Numeric buttons** (page 16)

22 **INPUT BALANCE control and AUTO INPUT BALANCE indicator** (page 22)

23 **DELAY button** (page 23)

24 **TONE controls** (page 14)

25 **SURROUND LEVEL CENTER –/+ buttons** (page 22 and 23)

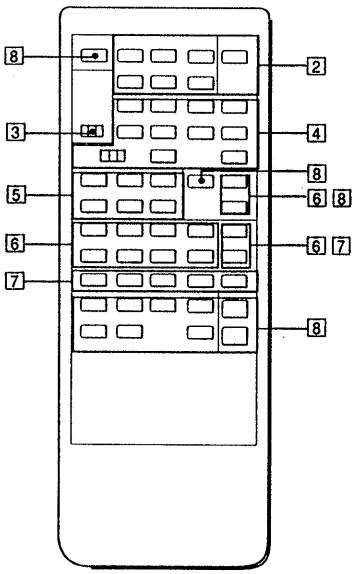
26 **SURROUND LEVEL REAR –/+ buttons** (page 22 and 23)

27 **SOURCE DIRECT button** (page 14)

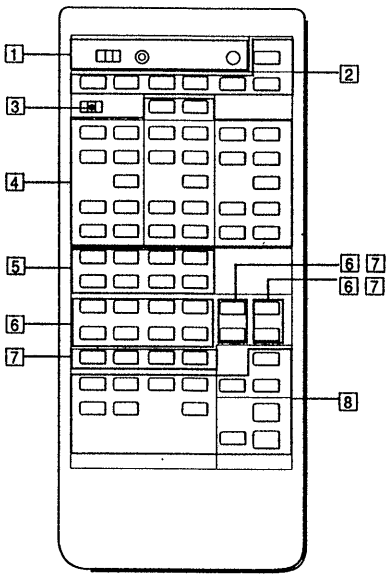
28 **LOUDNESS switch** (page 14)

29 **BALANCE control** (page 14)

Remote Commanders



RM-U213
(supplied with the STR-GX57ES)



RM-P313
(supplied with the STR-GX67ES)

1 Program control section (RM-P313 only)
Mode selector and indicator (page 24)
SONY STD: To control Sony equipment.
USER STD: To control equipment whose remote control functions are stored.
LEARN: To store functions of other remote commanders emitting infrared rays.
PROGRAM CLEAR button: Clears the stored functions.

2 Power control section
SYSTEM OFF button: Turns off the power of the whole system: LDP, VTR, TV and AUDIO.
LDP/VTR/TV/AUDIO POWER buttons: Control the power of each unit.

3 MODE button
1: To select the functions indicated in light gray such as DECK, DAT, CD player and SURROUND mode of the receiver.
2: To select the functions indicated in blue such as VTR, LDP (Laser disc player) and TV.

4 TAPE/DAT/VTR control section
ANT TV/VTR button: Selects the output signal from the antenna terminal on the VCR, either a TV signal or VCR programs.
VTR CH +/– buttons: Select channel on the VCR.
◄◄/►►: fast winding
■: Stop
◄/►: Play
II: Pause
●: Recording (RM-U213: While pressing ●, press ►)
REC MODE REV/FWD buttons (RM-P313 only):
For reverse recording, press REV and ● together.
For forward recording, press FWD and ● together.
DECK/VTR selector (RM-U213 only)
MODE 1(DECK A,B and DAT): Selects DECK A, B or DAT.
MODE 2(VTR 1, 2 and 3): Selects VTR 1, 2 or 3.
VTR 1: Betamax VCRs
VTR 2: 8mm VCRs
VTR 3: VHS VCRs

5 CDP/LDP control section
D (disc) SKIP: Disc skip (for a CD player equipped with a multi-disc changer)
►: Starts play.
I◄◄/►►I: Locates a desired selection
■: Stops play.
◄◄/►►: Manual search
II: Pause

6 TV control section
TV/VIDEO selector: Selects the program to see : TV or VIDEO.
VOL +/– buttons: Control the TV volume.
CH +/– buttons: Select a preset channel.
Program number (1 to 0) and ENTER buttons: Select the channel.

7 Sound control section
SURROUND buttons
ON/OFF: Turns on/off the surround mode.
MODE: Selects the surround mode.
T. (test) TONE: Generates a pink noise signal that is sent in succession to each speaker. (RM-U313 only)
DELAY: Adjust the delay time.
REAR VOL +/– buttons: Control the volume of rear speaker.
CENTER VOL +/– buttons: Control the volume of center speaker.

8 Receiver control section
FUNCTION selectors:
Select an input source of the receiver.
SHIFT button: Selects a memory page.
TUNER PRESET station select buttons: Select a preset station.
MUTING button: Mutes the sound.
MASTER VOL +/– buttons: Control the receiver volume.

Note on the ● (recording) button under 4 TAPE/DAT/VTR buttons
If your recorder is of such type as pressing ● puts it in recording pause mode, first press ● on this commander and then II.

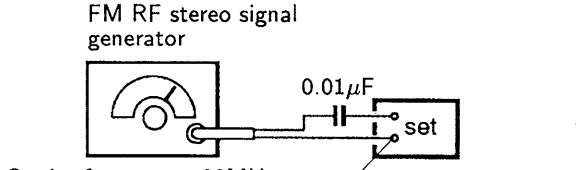
Note:
The ◄/► (play) buttons in 4 and 5 and the SHIFT button and PRESET +/– buttons in 8 can function without pressing one of the FUNCTION buttons in 8, if the CD player is connected to the CD jacks, the tape deck to the TAPE jacks and the video deck to the VIDEO 1 jacks (switch the DECK/VTR selector on the remote commander to VTR 1).

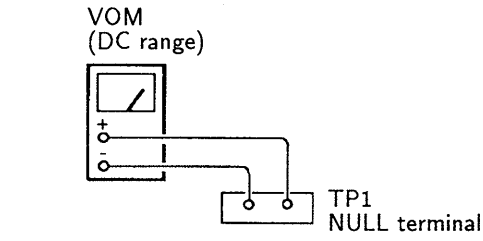
SECTION 2
ELECTRICAL ADJUSTMENTS

FM SECTION

· FM Discriminator (NULL) Adjustment

Setting :





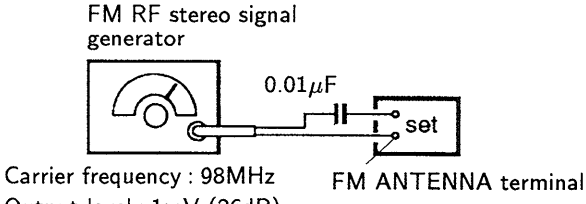
Procedure :

1. Tune the set to 98MHz.
2. Adjust T21 for a 0V reading on the VOM.

Note : FM Tuning Level adjustment should be made after FM discriminator adjustment.

FM Tuning Level Adjustment

Setting :

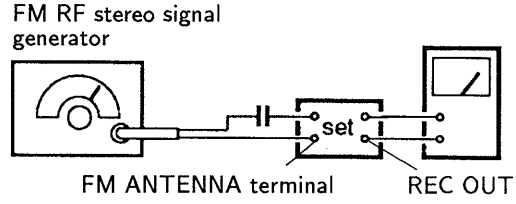


Procedure :

1. Tune the set to 98MHz.
2. Adjust RV24 so that the STEREO LED goes on.

· FM Stereo Separation Adjustment

Setting :



Carrier frequency : 98MHz
Output level : 1mV (60dB)
Modulation : 1kHz, 75kHz dev. (100%)

Procedure :

Tune the set to 98MHz.

FM stereo signal generator output channel	VTVM connection	VTVM reading (dB)
L-CH	L-CH	Ⓐ
R-CH	L-CH	Ⓑ Adjust RV21 for minimum reading.
R-CH	R-CH	Ⓒ
L-CH	R-CH	Ⓓ Adjust RV21 for minimum reading.

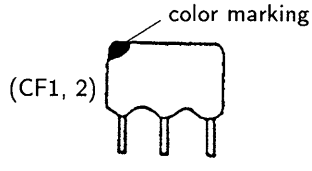
L-CH Stereo separation : Ⓐ - Ⓑ

R-CH Stereo separation : Ⓒ - Ⓓ

The separations of both channels should be equal.

Note on Ceramic Filter (CF1, 2) Replacement.

This set employs two ceramic filters (CF1, 2) which should have the same color marking to identify their center frequency. Therefore FM IF offset adjustment by (*A, *B) connection is necessary to match the center frequency of the ceramic filters used with FM intermediate frequency.



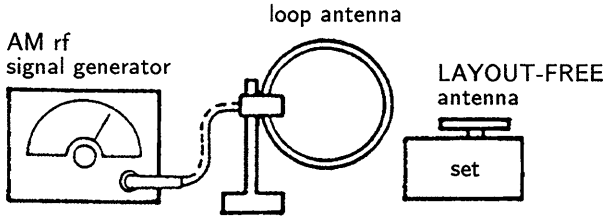
○ : connect
× : not connect

Ceramic filter		Connection		FM intermediate frequency (MHz)
Color mark	Center frequency (MHz)	*A	*B	
White	10,750	○	×	10,750
Red	10,700	×	×	10,700
Black	10,650	○	○	10,650

AM SECTION

· AM Signal Adjustment

Setting :



Carrier frequency : 1,050kHz
Modulation : 400Hz, 30% modulation

Procedure :

1. Set loop antenna so that the LAYOUT-FREE antenna input level becomes 0.2V (106dB)
2. Tune the set to 1,050kHz.
3. Adjust the RV23 so that the 8 point segment of the signal meter goes on.

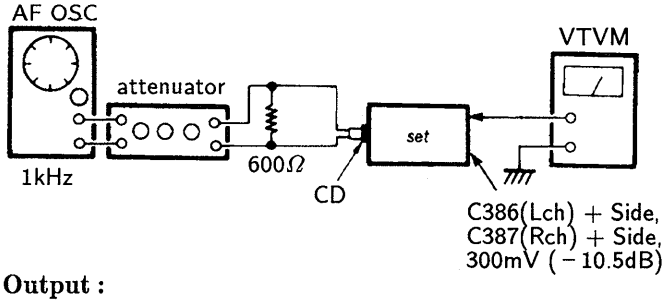
SURROUND SECTION

· SORROUND output level Adjustment

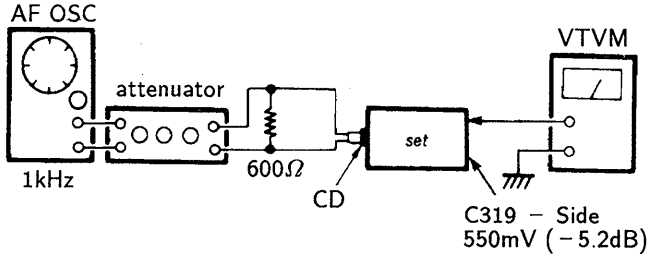
Setting :

FUNCTION : CD
SURROUND : ON/SIMULATED
DELAY : M

Input :



Output :



Procedure :

1. Feed-in 1kHz 300mV (-10.5dB)
   Signal to + side of capacitor C386 and C387.
2. Adjust RV301 so that the reading on the voltmeter becomes 550mV (-5.2dB) at minus (-) side of capacitor C319 with the adjustment.

AMP SECTION

DC Bias Adjustment

· Perform this adjustment after replacement of power amp or drive circuit transistors.

setting :

VOLUME : 0
SPEAKERS : OFF (no load)

Procedures :

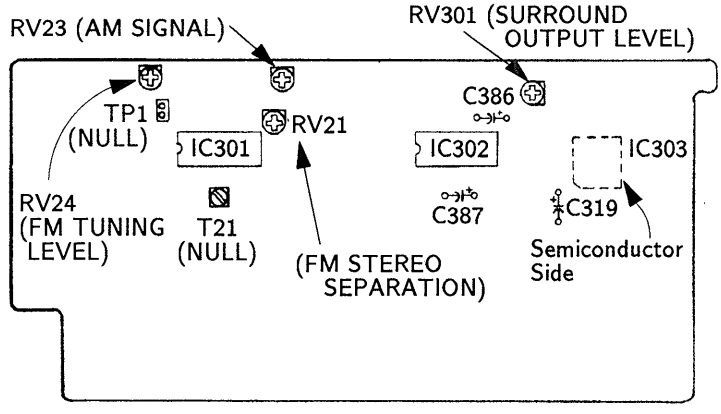
1. Connect the digital voltmeter to Bias Test Point (TP701 ①, ② : LCH, ③, ④ : RCH)
2. Increase the AC power voltage gradually to 120V confirming that the voltmeter will not indicate an abnormal value.
3. Confirm that the display is normal.
4. Adjust RV701 (L-ch) or RV751 (R-ch) so that the reading on the voltmeter becomes 2.5mV within 30 seconds after the power turned on.

Note : It is normal that the voltage will increase as time passes.

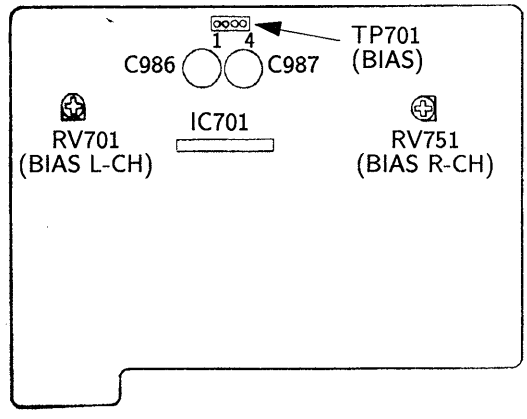
5. Turn the power off and remove the digital voltmeter.

Adjustment Location :

【SURR TUNER BOARD】 (COMPONENT SIDE)



【MAIN BOARD】 (COMPONENT SIDE)



SECTION 3
DIAGRAMS

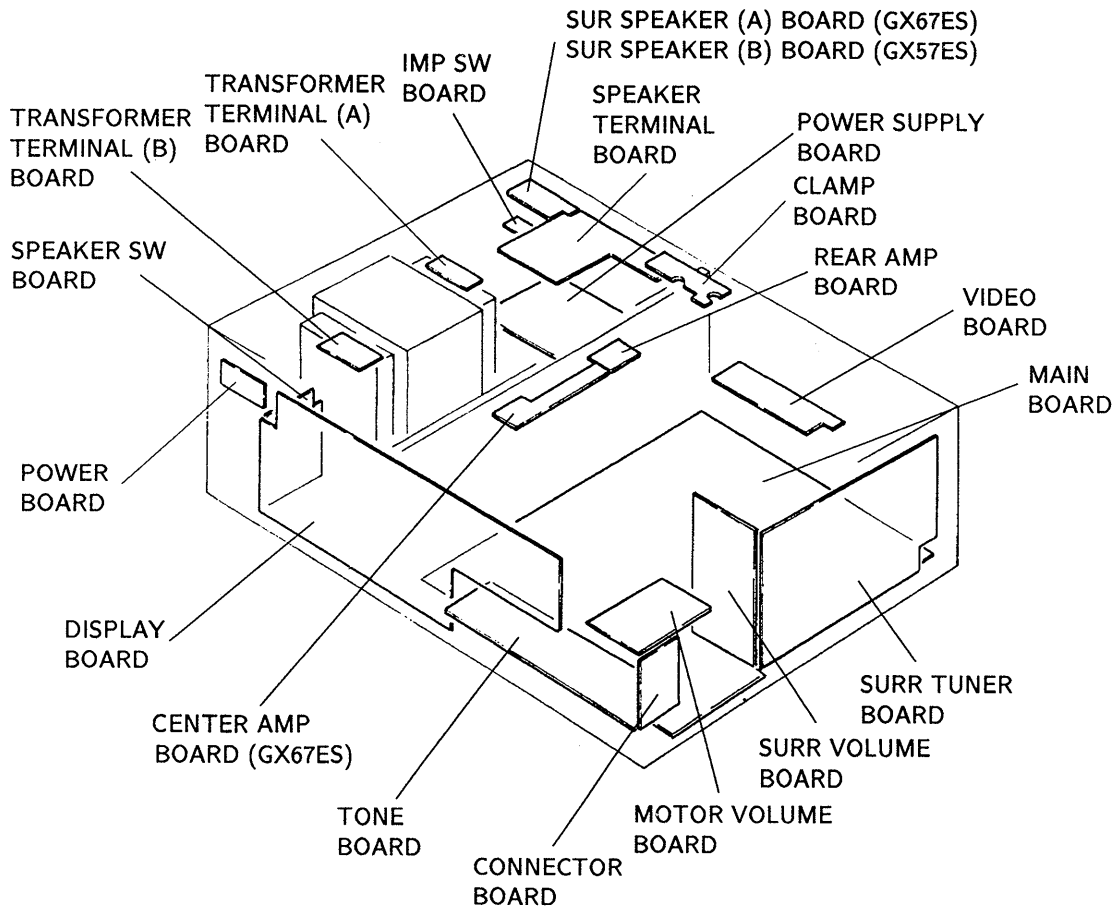
3-1. IC101 CXP-50116

The main feature of this IC are control the fluorescent indicator tube and also, built in 14bit PWM output for D/A converter, A/D converter and remote control reception circuit.

Pin No.	Pin Name	I /O	Description
1	MUTING	O	Muting output to LCH mute sw Q115, 165.
2	F-MUTE	O	Muting output to function muting sw Q113, Q163.
3	P-MUTE	O	Muting output to RCH mute sw Q114, Q164.
4	T-MUTE	O	Muting output to tuner mute IC21 ⑰ pin and Q116.
5 - 16	S1 - S12	O	Signal output to SEGMENT (a - i) of the Fluorescent indicator tube.
17 - 19	NC	–	Not used.
20	D1	O	Output to DIGIT 1G of the Fluorescent indicator tube.
21	D9	O	Output to DIGIT 9G of the Fluorescent indicator tube.
22	D8	O	Output to DIGIT 8G of the Fluorescent indicator tube.
23	D7	O	Output to DIGIT 7G of the Fluorescent indicator tube.
24	D6	O	Output to DIGIT 6G of the Fluorescent indicator tube.
25	D5	O	Output to DIGIT 5G of the Fluorescent indicator tube.
26	D4	O	Output to DIGIT 4G of the Fluorescent indicator tube.
27	D3	O	Output to DIGIT 3G of the Fluorescent indicator tube.
28	D2	O	Output to DIGIT 2G of the Fluorescent indicator tube.
29	STOP	I	Stop signal input ("L" : STOP).
30	TX	—	Not used.
31	TEX	—	Not used.
32	RESET	I	Reset signal input ("L" : RESET).
33	NC	—	Not used.
34	VDD	—	Power supply (+5V).
35	AUTO STOP	I	Tuning signal input from IC21 ㉑ pin.
36	STEREO	I	Stareo detector signal output from IC21 ㉒ pin.
37	PROTECT	I	Protect detector signal input.
38	LINE I/O	I	Key, Fluorescent indicator tube check terminal ("L" : check mode).
39	L-SR	O	Latch signal output to surround processor IC303 ⑮ pin.
40	L-VOL	O	Latch signal output to surround control IC309 ⑭ pin.
41	L-EX	O	Latch signal output to video sw IC105 ② pin.
42	L-PS	O	Latch signal output to tuner function IC81 ② pin and IC501, 502 ⑬ pin.
43	NC	—	Not used.
44	CL	I	Clock signal input from this IC ㊼ pin.
45	D0	O	DATA output.
46	SI	—	Not used.
47	CLOCK OUT	O	Clock signal output.
48	VOL/DW	O	VOL-down signal output to VOL-motor control IC104 ① pin.
49	VOL-UP	O	VOL-UP signal output to VOL-motor control IC104 ④ pin.
50	LED	O	LED drive signal output to LED drive Q146.
51 - 56	KEY OUT	O	Key output to key matrix (S0 - S5) and LED drive Q140 - 145.
57, 58	KEY OUT	—	Not used.
59	LED2	O	Output to LED drive Q147.
60, 61	NC	—	Not used.
62	SIRCS	I	SIRCS signal input.
63 - 69	KEY IN	I	Key input from key matrics (K10 - K16).
70	SYS-POWER	I	Input from power sw (S138).
71	VSS	—	GND.

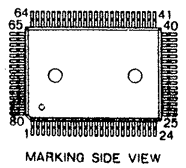
Pin No.	Pin Name	I /O	Description
72	XTAL	O	Clock osc output.
73	NC	—	Not used.
74	EXTAL	I	Clock osc input.
75	V REF	I	Power supply (+5V).
76	V FDP	I	−22V.
77	R-REPLAY	O	Signal output to rear speaker relay drive Q621.
78	C-RY	O	Signal output to center speaker relay drive Q622.
79	F-RY	O	Signal output to front speaker relay drive Q704.
80	P-RY	O	Signal output to power sw drive Q952.

CIRCUIT BOARD LOCATION



• SEMICONDUCTOR LEAD LAYOUTS

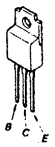
CXP50116-220Q



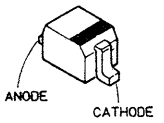
MARKING SIDE VIEW

2SA988-PAFAEA
2SC1841-PAFAEA
2SC3623A-LK

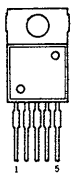
2SD2012



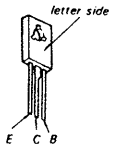
1SS355



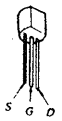
LM3875-2



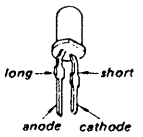
2SA1142-QPE



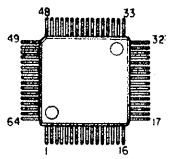
2SK246-GR3



SEL2810A-C

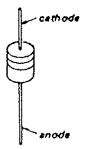


LV1001M

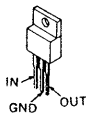


2SA1175-HFE
2SC2785-HFE

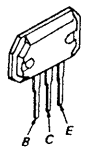
HZS2ALL
HZS6C3L
HZS22-2L
1SS119
1SS120
11ES2



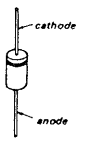
M5F78M05L
M5F78M12L



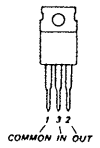
2SA1215-OY
2SC2921-OPY



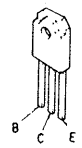
HZ4ALL
UZL-6M2
UZP5.6B



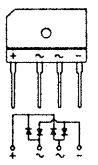
M5F79M12L



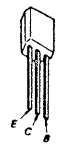
2SA1492-OY
2SC3856-OY



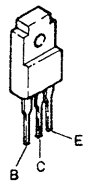
RBA-402
RBV-602-01



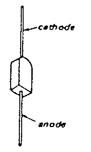
DTA114ES
DTA124ES
DTC114ES
DTC124ES
DTC144ES
2SC2603-EF
2SC2669-OY
2SC3113-AB



2SA1684-LK
2SC4431-LK



SV-04



3-2. PRINTED WIRING BOARDS —MAIN BOARD SECTION—

• See Page 12 for Semiconductor Lead Layouts.

• SEMICONDUCTOR LOCATION

Ref. No.	Location	Ref. No.	Location	Ref. No.	Location
D150	H-8	IC105	H-8	Q711	G-8
D151	I-8	IC201	C-25	Q720	F-16
D153	I-8	IC501	G-4	Q721	E-16
D154	I-8	IC502	G-6	Q751	B-5
D201	C-23	IC503	H-4	Q752	C-5
D202	C-23	IC530	D-3	Q753	C-6
D541	D-23	IC541	C-27	Q754	B-4
D542	D-27	IC601	J-20	Q755	B-7
D601	I-20	IC651	J-15	Q756	B-3
D621	F-15	IC701	D-8	Q757	C-4
D622	F-14	IC702	F-9	Q962	F-23
D651	I-15	IC703	D-10	Q963	H-22
D701	C-11	IC752	F-8	Q964	I-22
D702	C-10	IC952	H-11	Q965	I-23
D703	C-10	IC953	G-10	Q966	I-23
		IC954	I-11		
D704	G-8			Q967	I-23
D704A	F-15			Q968	I-23
D705	F-15	PH701	E-9	Q969	I-23
D710	B-10	PH751	E-8	Q970	C-12
D711	C-10				
D711A	E-16	Q110	H-8		
D712	D-16	Q113	F-7	STR-GX57ES ONLY	
D713	D-16	Q114	I-10		
D714	F-16	Q115	I-10	D101	I-30
D715	E-16	Q116	I-6	D623	F-20
				D624	F-20
D751	C-5	Q150	H-8	D625	F-21
D752	C-4	Q163	F-7	D626	F-21
D753	C-4	Q164	H-10		
D760	C-5	Q185	H-10		
D761	C-6	Q201	C-25	STR-GX67ES ONLY	
D951	F-23	Q202	C-24		
D952	H-23	Q203	C-23	D101	I-27
D953	H-23	Q204	C-23	D623	C-20
D954	H-23	Q205	C-24	D624	C-20
D955	F-23	Q206	C-23	D625	C-21
				D626	C-21
D956	F-23	Q207	D-24		
D957	F-23	Q530	E-5		
D958	G-23	Q580	E-5		
D959	I-22	Q601	I-20		
D960	I-23	Q621	F-15		
D961	H-22	Q622	F-14		
D970	C-12	Q651	I-15		
D972	F-11	Q701	B-11		
D973	F-11	Q702	C-10		
D974	F-12	Q703	C-11		
D975	F-12	Q704	B-9		
D976	E-6	Q705	B-12		
D977	E-6	Q706	C-10		
D978	E-6	Q707	C-12		
D979	E-6	Q708	C-5		
D980	D-5	Q709	C-4		
D981	E-11	Q710	C-3		

Note :

• ○— : parts extracted from the component side.
• ■ : parts mounted on the conductor side.

【MAIN BOARD】

【SPEAKER TERMINAL BOARD】

【SUR SPEAKER (A) BOARD】

【SUR SPEAKER (B) BOARD】

【VIDEO BOARD】

【POWER SUPPLY BOARD】

【SENSOR AMP BOARD】

【REAR AMP BOARD】

【IMP SW BOARD】

【TRANSFORMER TERMINAL (A) BOARD】

【TRANSFORMER TERMINAL (B) BOARD】

The following chart indicate the difference of parts by model.

※	GX67ES	GX37ES
C954,957	10000/63	10000/50
R703,753	470	510
Q704,754	2SC2921	2SC3856
Q705,755	2SA1215	2SA1492
IC701	STK3102-3	STK3082-3

Note :
- All capacitors are in μF unless otherwise noted. pF : μμF
  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ : internal component.
- ⚠ : nonflammable resistor.
- ⚠ : fusible resistor.

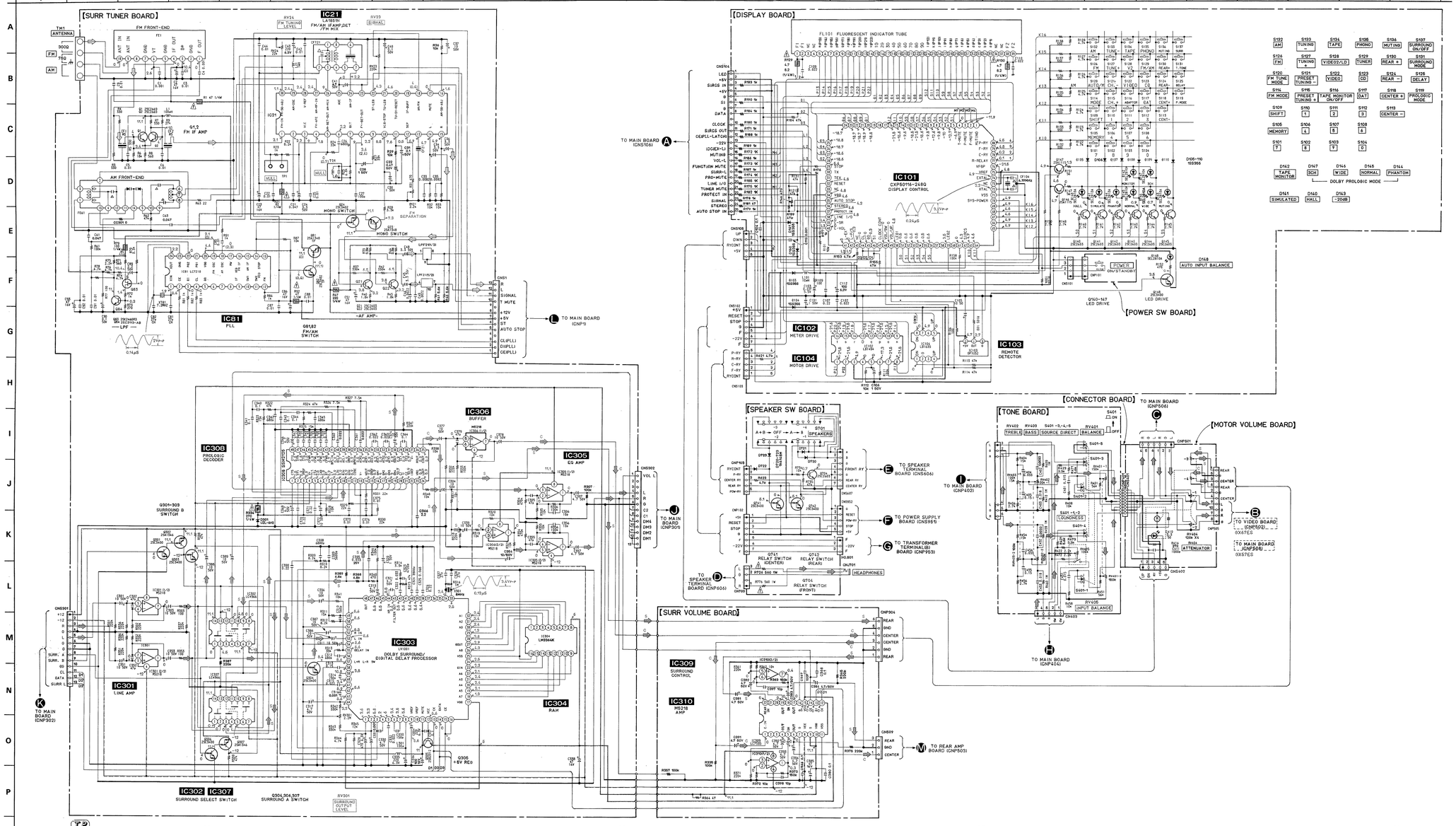
Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- ▭▭▭ : B+ Line
- ▭▭▭ : B− Line
- ▭ : adjustment for repair.
- AC voltage readings in the bias oscillator with a VTVM, no mark : FM
  ( ) : AM
- Voltages are taken with a VOM (Input impedance 10M Ω). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM ⇨ : SURROUND REAR
  ⇨ : CD ⇨ : SURROUND CENTER

3-4. SCHEMATIC DIAGRAMS —DISPLAY BOARD SECTION—

• See Page 34 for IC Block Diagrams.

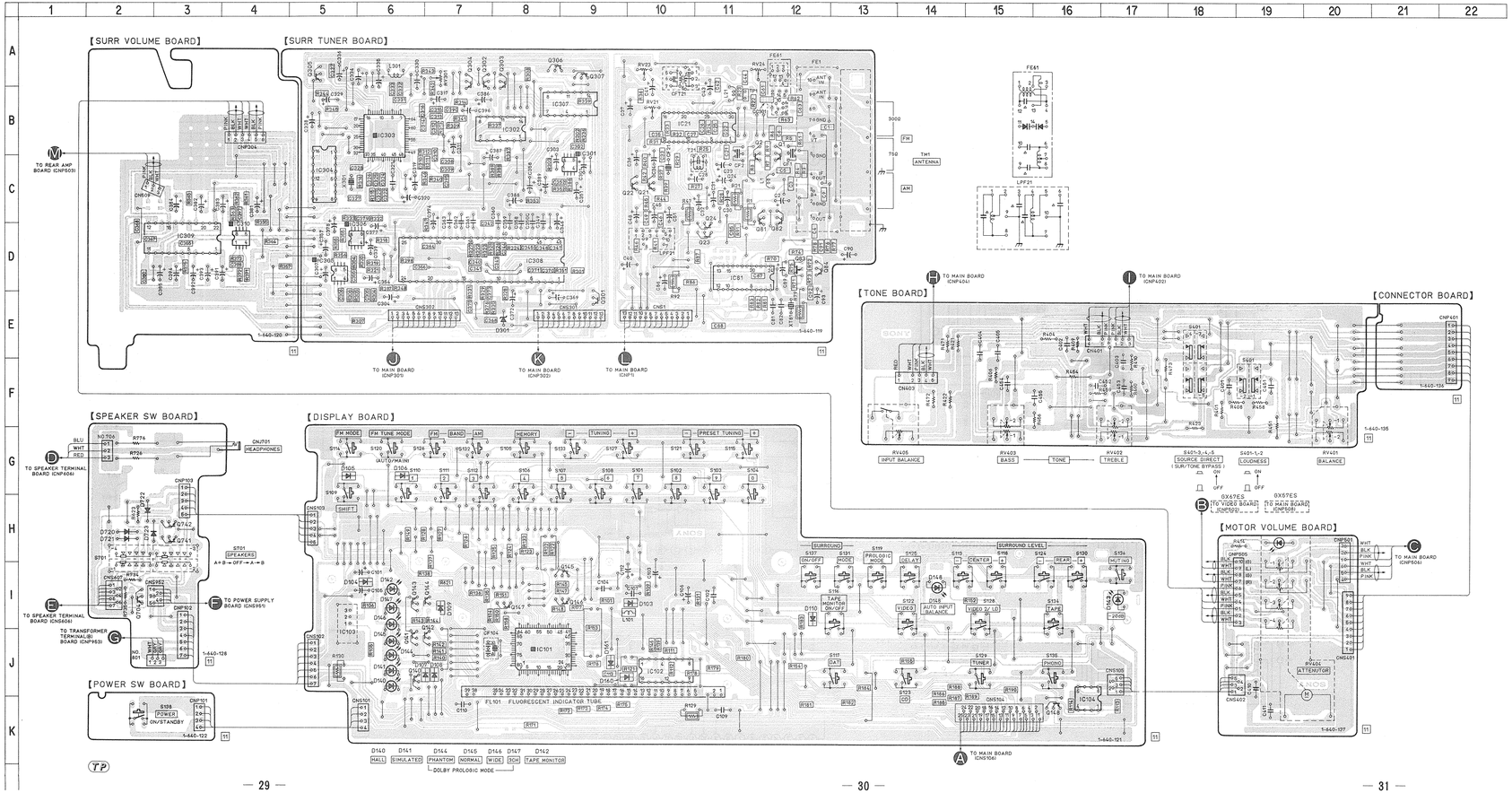


Note :

- All capacitors are in μF unless otherwise noted. pF : μμF
  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and ¼W or less unless otherwise specified.
- △ : internal component.
- ⚠ : nonflammable resistor.
- ⚠ : fusible resistor.

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- ▭▭▭▭ : B+ Line
- ▭▭▭▭ : B− Line
- ▭▭▭ : adjustment for repair.
- AC voltage readings in the bias oscillator with a VTVM, no mark : FM
  ( ) : AM
- Voltages are taken with a VOM (input impedance 10M Ω), voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM ⇨ : SURROUND REAR
  ⇨ : CD ⇨ : SURROUND CENTER



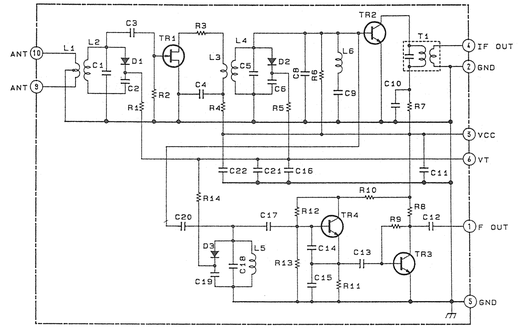
• SEMICONDUCTOR LOCATION

Ref. No.	Location	Ref. No.	Location
D103	I-10	Q1	B-12
D104	I-6	Q2	B-11
D105	G-5	Q21	C-10
D106	G-6	Q22	C-10
D107	J-7	Q23	D-11
D108	J-7	Q24	C-11
D109	I-7	Q81	C-12
D110	I-12	Q82	C-12
D140	J-6	Q83	D-12
D141	J-6	Q84	D-12
D142	I-6	Q140	J-6
D143	I-17	Q141	J-6
D144	J-6	Q142	J-7
D145	J-6	Q143	I-6
D146	I-6	Q144	I-7
D147	I-6	Q145	I-9
D148	I-14	Q146	I-9
D160	J-10	Q147	I-8
D161	J-10	Q148	K-16
D301	E-8	Q301	E-9
D720	H-2	Q302	A-7
D721	H-2	Q303	A-8
D722	H-2	Q304	A-7
D723	H-3	Q305	A-5
		Q306	A-8
IC21	B-11	Q307	A-9
IC81	D-11	Q704	I-2
IC101	J-8	Q741	H-3
IC102	J-10	Q742	H-3
IC103	I-5		
IC104	J-16		
IC301	C-9		
IC302	B-8		
IC303	B-6		
IC304	C-5		
IC305	D-5		
IC306	D-5		
IC307	B-9		
IC308	D-7		
IC309	D-3		
IC310	D-4		

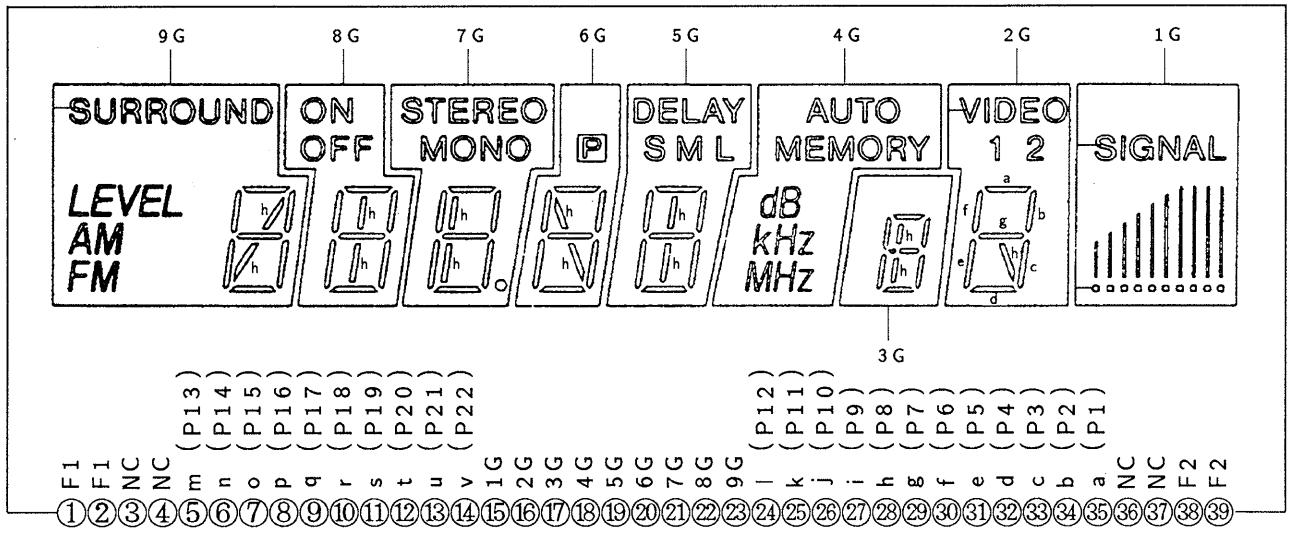
Note :

- ○—: parts extracted from the component side.
- ■ : parts mounted on the conductor side.

FE1



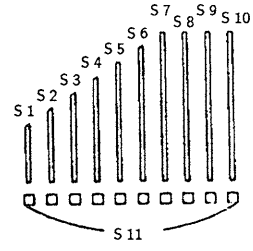
FL 101 FLUORESCENT INDICATOR TUBE


9G
8G
7G
6G
5G
4G
2G
1G
SURROUND
ON
OFF
STEREO
MONO
P
DELAY
S M L
AUTO
MEMORY
VIDEO
1 2
SIGNAL
LEVEL
AM
FM
dB
kHz
MHz
3G
F1 F1 NC NC m n o p q r s t u v 1G 2G 3G 4G 5G 6G 7G 8G 9G l k j i h g f e d c b a NC NC F2 F2
(P13) (P14) (P15) (P16) (P17) (P18) (P19) (P20) (P21) (P22) (P12) (P11) (P10) (P9) (P8) (P7) (P6) (P5) (P4) (P3) (P2) (P1)
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳ ㉑ ㉒ ㉓ ㉔ ㉕ ㉖ ㉗ ㉘ ㉙ ㉚ ㉛ ㉜ ㉝ ㉞ ㉟ ㊱ ㊲ ㊳ ㊴

Anode connection

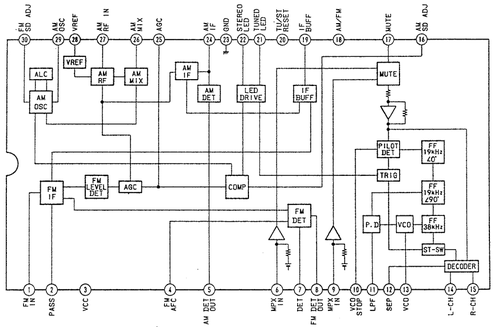
	9 G	8 G	7 G	6 G	5 G	4 G	3 G	2 G	1 G
P 1	a	a	a	a	a	–	a	a	–
P 2	b	b	b	b	b	–	b	b	–
P 3	c	c	c	c	c	–	c	c	–
P 4	d	d	d	d	d	–	d	d	–
P 5	e	e	e	e	e	–	e	e	–
P 6	f	f	f	f	f	–	f	f	–
P 7	g	g	g	g	g	–	g	g	–
P 8	h	h	h	h	h	AUTO	h	h	–
P 9	AM	–	–	–	DELAY	kHz	i	–	–
P 10	FM	–	○	–	L	MHz		1	–
P 11	LEVEL	ON	STEREO	–	M	dB		2	–
P 12	–	OFF	MONO	P	S	MEMORY			–
P 13	–	–	–	–	–	–	–	–	S 1
P 14	–	–	–	–	–	–	–	–	S 2
P 15	–	–	–	–	–	–	–	–	S 3
P 16	–	–	–	–	–	–	–	–	S 4
P 17	–	–	–	–	–	–	–	–	S 5
P 18	–	–	–	–	–	–	–	–	S 6
P 19	–	–	–	–	–	–	–	–	S 7
P 20	–	–	–	–	–	–	–	–	S 8
P 21	–	–	–	–	–	–	–	–	S 9
P 22	–	–	–	–	–	–	–	–	S 10

Grid indication

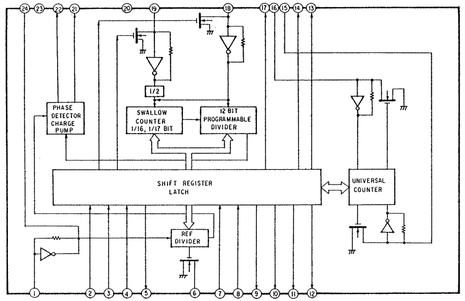


• IC BLOCK DIAGRAMS

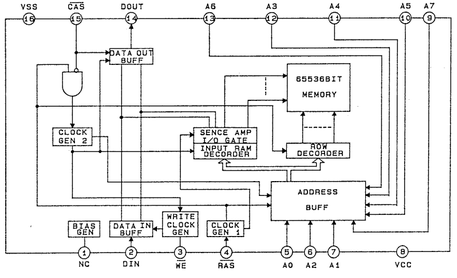
IC21 LA1851N



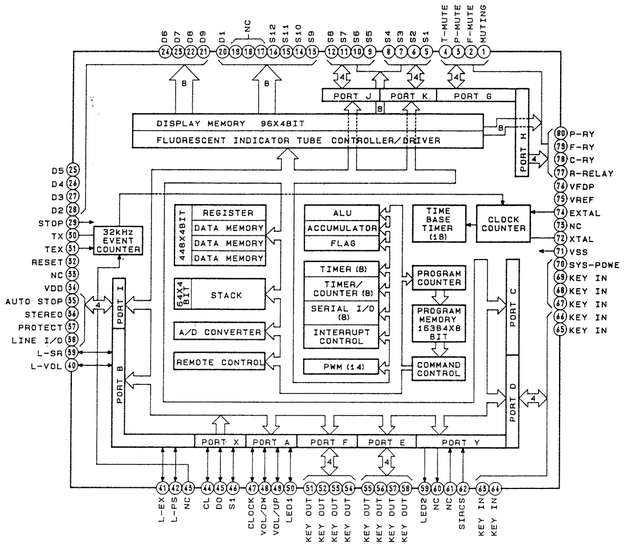
IC81 LC7218



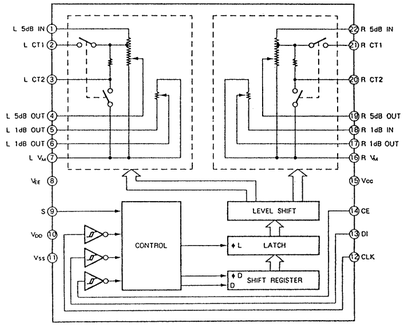
IC304 LM3364K-15



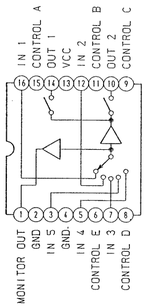
IC101 CXP50116-248Q



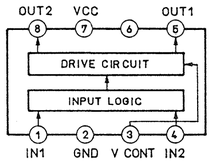
IC309 LC7535



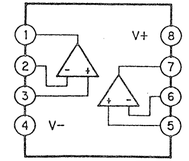
IC201 BA7625



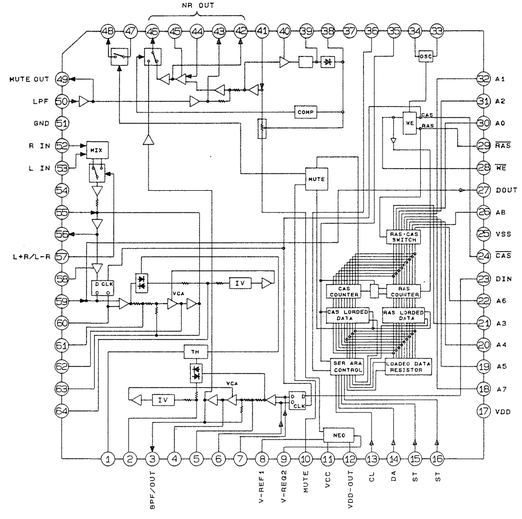
IC104 LB1639



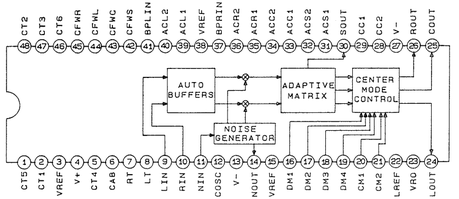
IC301 M5218AFP



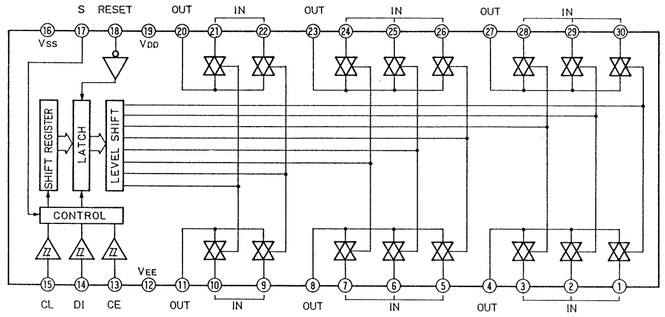
IC303 LV1001M



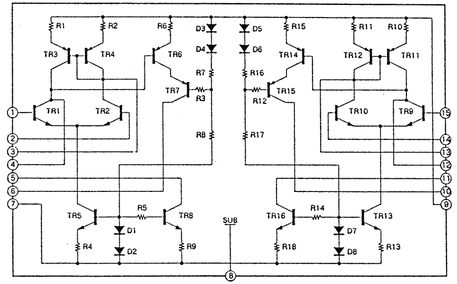
IC308 SSM-2125



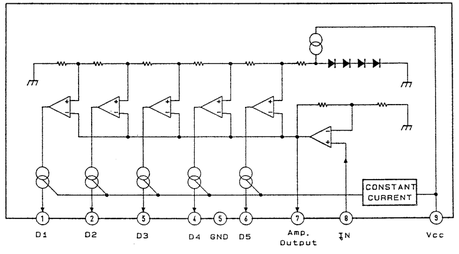
IC501, 502 LC7822



IC701 STK3102 Ⅲ, STK3082 Ⅲ



IC702, IC752 BA6125



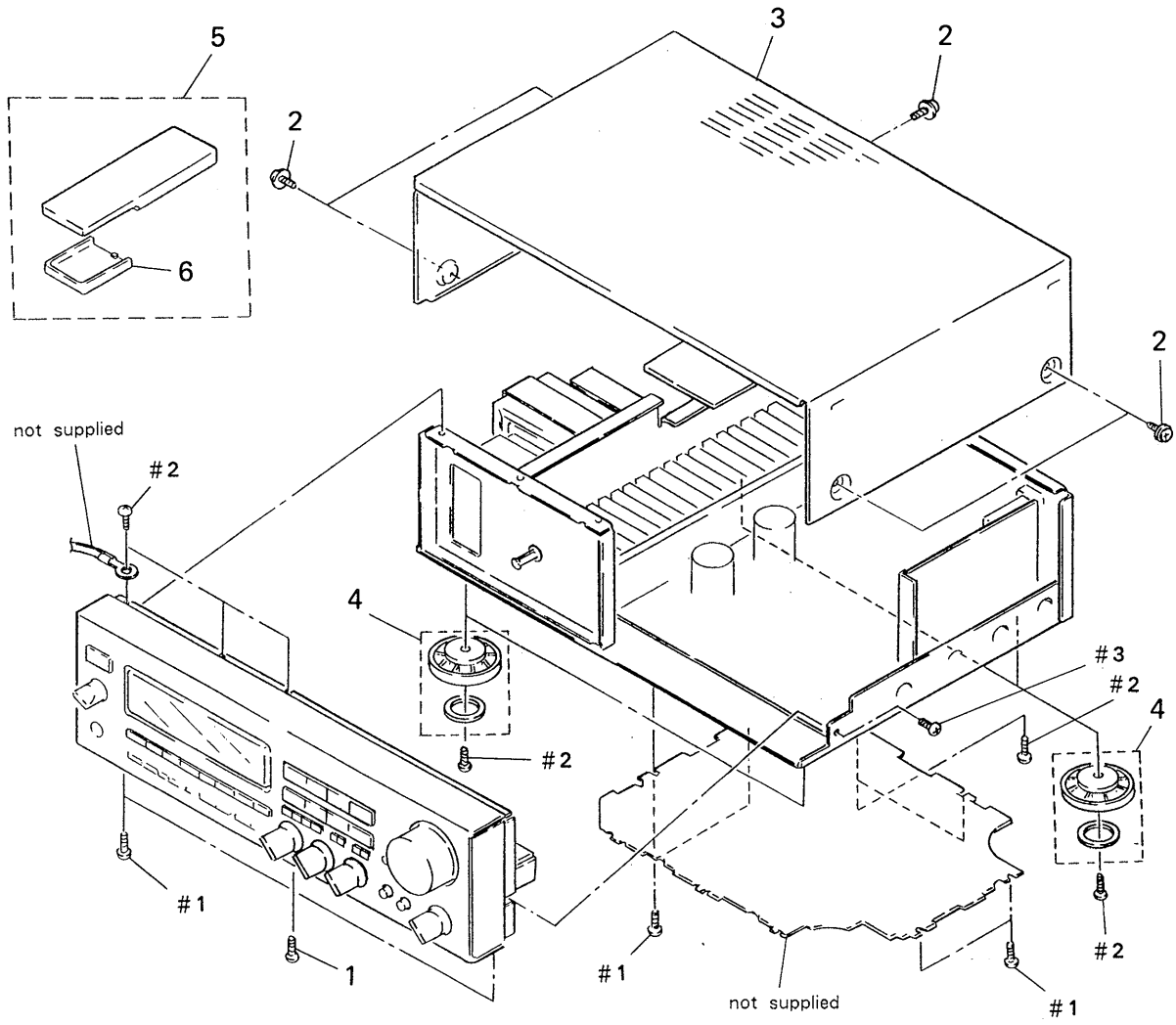
SECTION 4
EXPLODED VIEWS

NOTE:
- −XX, −X mean standardized parts, so they may have some differences from the original one.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Color indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE)....(RED)
  ↑ ↑
  Parts color Cabinet's color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (#mark) list is given in the last of this parts list.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

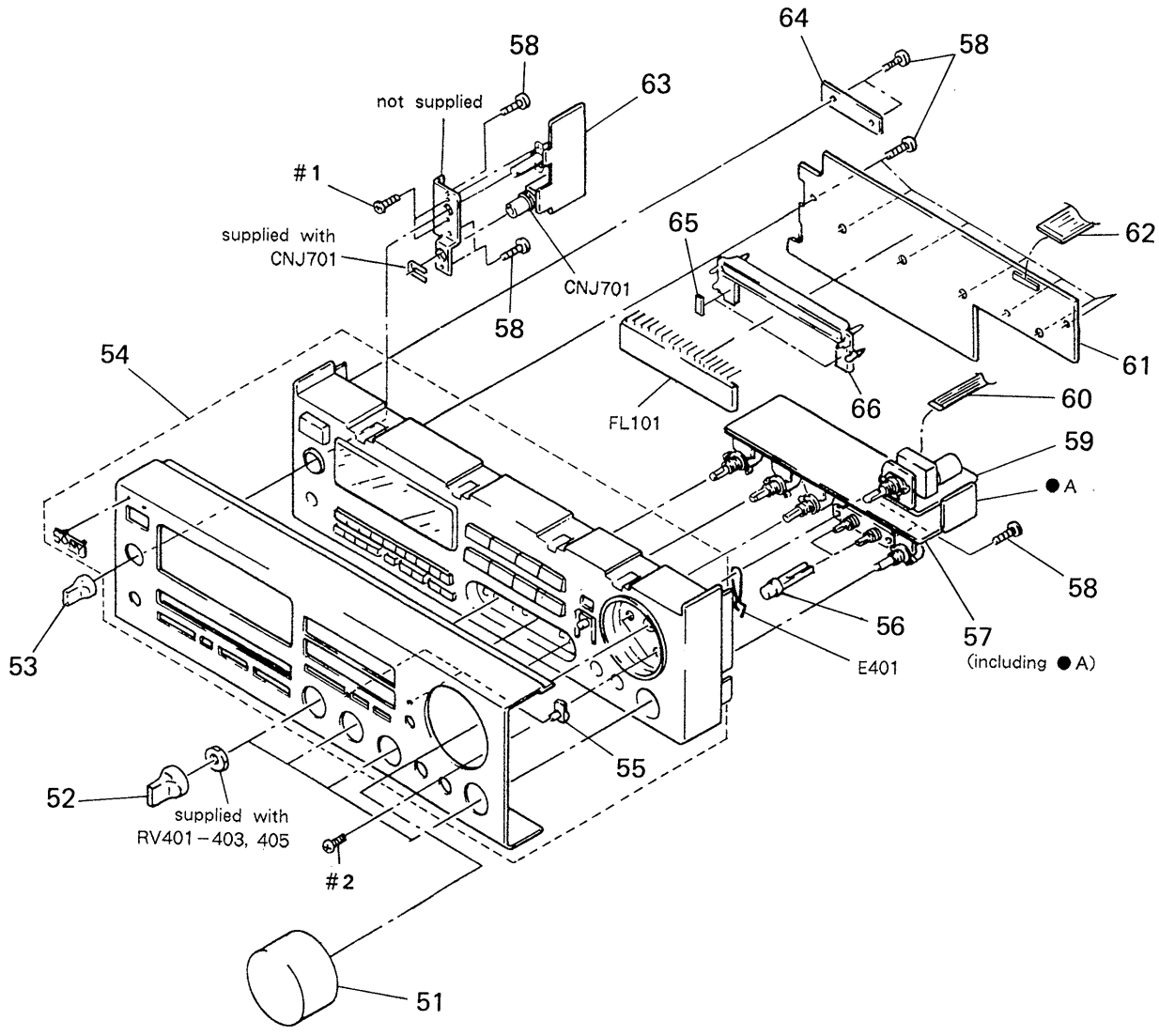
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

4-1. FRONT PANEL SECTION-1



Ref. No.	Part No.	Description	Remark
1	3-703-685-21	SCREW (+BV 3X8)	
2	3-704-366-01	SCREW (CASE) (M3X8)	
3	4-931-031-11	CASE	
4	X-3304-944-1	FOOT ASSY	
5	1-465-811-11	COMMANDER, STANDARD TYPE (GX67ES)	
5	1-465-812-11	COMMANDER, STANDARD TYPE (GX57ES)	
6	3-707-584-01	COVER, BATTERY (GX57ES)	
6	4-925-079-01	COVER (6), BATTERY (GX67ES)	

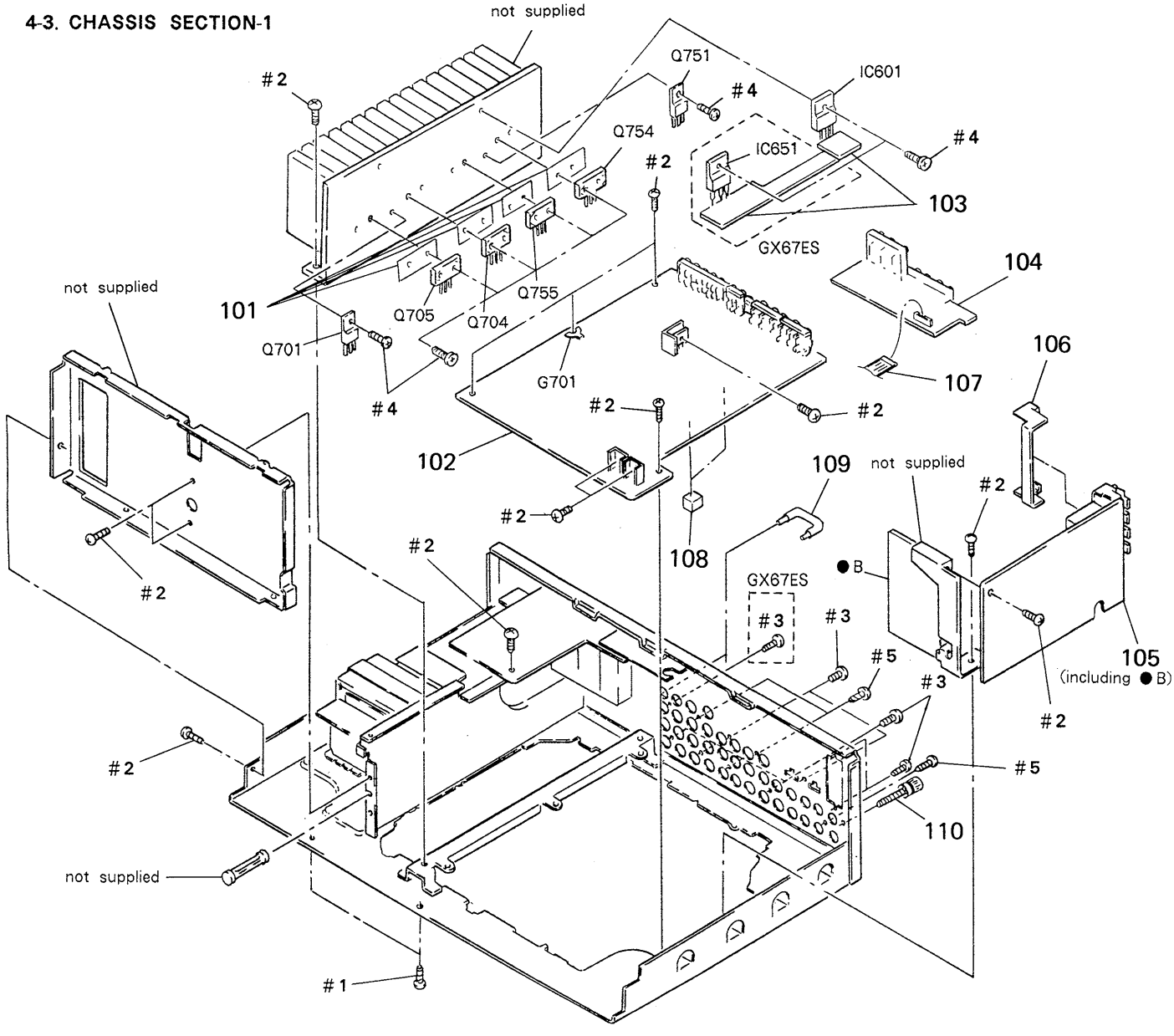
4-2. FRONT PANEL SECTION-2



Ref. No.	Part No.	Description	Remark
51	X-4941-650-1	KNOB (A) ASSY	
52	4-916-745-01	KNOB (DIA. 21)	
53	4-908-097-21	KNOB	
54	A-4323-934-A	PANEL ASSY, FRONT (GX67ES)	
54	A-4323-936-A	PANEL ASSY, FRONT (GX57ES)	
55	3-684-018-01	COVER, LAMP, REC	
56	4-931-926-01	BUTTON (B)	
57	* A-4341-909-A	TONE BOARD, COMPLETE	
58	4-928-635-01	SCREW, +BV (2.6X8) TAPPING	
59	* 1-640-137-11	MOTOR VOLUME BOARD	
60	1-575-662-11	WIRE, FLAT TYPE (5 CORE)	

Ref. No.	Part No.	Description	Remark
61	* A-4341-900-A	DISPLAY BOARD, COMPLETE (GX67ES)	
61	* A-4345-793-A	DISPLAY BOARD, COMPLETE (GX57ES)	
62	1-690-000-11	WIRE, FLAT TYPE (25 CORE)	
63	* 1-640-128-11	SPEAKER SW BOARD	
64	* 1-640-122-11	POWER SW BOARD	
65	* 4-945-305-01	CUSHION (FL TUBE)	
66	* 4-934-443-01	HOLDER (FL TUBE)	
E401	* 1-535-624-11	TERMINAL, PIN JACK	
FL101	1-519-645-11	INDICATOR TUBE, FLUORESCENT	

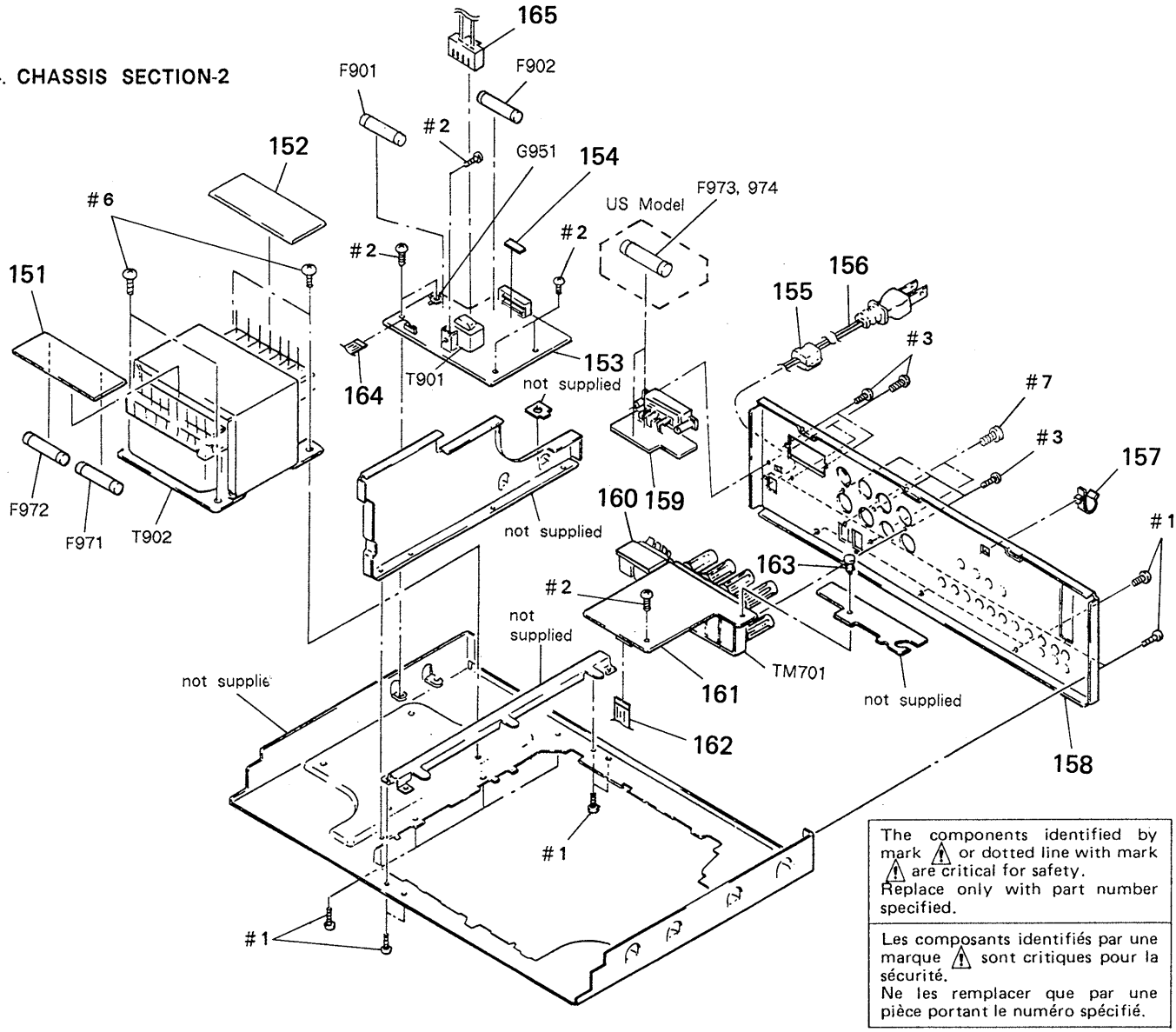
4-3. CHASSIS SECTION-1



Ref. No.	Part No.	Description	Remark
101	4-885-901-31	SHEET, RADIATION (GX67ES)	
101	4-911-232-01	SHEET, INSULATING (GX57ES)	
102	* A-4341-908-A	MAIN BOARD, COMPLETE (GX67ES:US)	
102	* A-4341-914-A	MAIN BOARD, COMPLETE (GX67ES:Canadian)	
102	* A-4341-922-A	MAIN BOARD, COMPLETE (GX57ES:US)	
102	* A-4341-925-A	MAIN BOARD, COMPLETE (GX57ES:Canadian)	
103	* A-4341-907-A	SUB AMP BOARD, COMPLETE (GX67ES)	
103	* A-4341-921-A	SUB AMP BOARD, COMPLETE (GX57ES)	
104	* A-4341-902-A	VIDEO BOARD, COMPLETE (GX67ES)	
104	* A-4341-917-A	VIDEO BOARD, COMPLETE (GX57ES)	
105	* A-4341-899-A	TUNER & DOLBY BOARD, COMPLETE (GX67ES)	
105	* A-4341-915-A	TUNER & DOLBY BOARD, COMPLETE (GX57ES)	
106	* 4-924-988-11	PLATE (ST), GROUND	
107	* 1-575-850-11	WIRE, FLAT TYPE (9 CORE)	
108	4-608-466-01	SPACER	
109	1-535-706-11	PLUG, JUMPER	
110	3-706-165-00	SCREW	

Ref. No.	Part No.	Description	Remark
G701	* 4-904-446-01	PLATE, GROUND	
Q701	8-729-209-15	TRANSISTOR 2SD2012	
Q704	8-729-320-71	TRANSISTOR 2SC3856-OY (GX57ES)	
Q704	8-729-320-96	TRANSISTOR 2SC2921-OPY (GX67ES)	
Q705	8-729-320-72	TRANSISTOR 2SA1492-OY (GX57ES)	
Q705	8-729-320-73	TRANSISTOR 2SA1215-OY (GX67ES)	
Q751	8-729-209-15	TRANSISTOR 2SD2012	
Q754	8-729-320-71	TRANSISTOR 2SC3856-OY (GX57ES)	
Q754	8-729-320-96	TRANSISTOR 2SC2921-OPY (GX67ES)	
Q755	8-729-320-72	TRANSISTOR 2SA1492-OY (GX57ES)	
Q755	8-729-320-73	TRANSISTOR 2SA1215-OY (GX67ES)	

4-4. CHASSIS SECTION-2



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
151	* 1-640-138-11	TRANSFORMER TERMINAL (B) BOARD (GX67ES)	
151	* 1-640-139-11	TRANSFORMER TERMINAL (B) BOARD (GX57ES)	
152	* 1-640-132-11	TRANSFORMER TERMINAL (A) BOARD (GX67ES)	
152	* 1-640-133-11	TRANSFORMER TERMINAL (A) BOARD (GX57ES)	
153	* A-4341-905-A	POWER SUPPLY BOARD, COMPLETE	
154	*·3-701-947-19	LABEL (6.3A), FUSE (GX57ES:Canadian)	
155	* 3-703-244-00	BUSHING (2104), CORD	
156	⚠ 1-575-975-11	CORD, POWER	
157	* 2-379-614-01	HOOK	
158	* 4-944-549-01	PANEL, BACK (GX67ES:US)	
158	* 4-944-549-11	PANEL, BACK (GX67ES:Canadian)	
158	* 4-944-549-21	PANEL, BACK (GX57ES:US)	
158	* 4-944-549-31	PANEL, BACK (GX57ES:Canadian)	
159	* 1-640-131-11	IMP SW BOARD (Canadian)	
159	* 1-641-425-11	IMP SW BOARD (US)	
160	* 1-640-125-11	SUR SPEAKER (A) BOARD (GX67ES)	
160	* 1-640-126-11	SUR SPEAKER (B) BOARD (GX57ES)	

Ref. No.	Part No.	Description	Remark
161	* 1-640-124-11	SPEAKER TERMINAL BOARD	
162	1-690-047-11	WIRE, FLAT TYPE (7 CORE)	
163	3-703-356-00	RIVET, T TYPE	
164	* 1-575-847-11	WIRE, FLAT TYPE (5 CORE)	
165	1-690-058-71	LEAD (WITH CONNECTOR) (2 CORE)	
F901	⚠ 1-532-746-11	FUSE, GLASS TUBE 4A 125V	
F902	⚠ 1-532-748-11	FUSE, GLASS TUBE 6.3A 125V (GX57ES:Canadian)	
F902	⚠ 1-532-749-11	FUSE, GLASS TUBE 8A 125V (GX57ES:US/GX67ES)	
F971	⚠ 1-532-746-11	FUSE, GLASS TUBE 4A 125V (GX57ES)	
F971	⚠ 1-532-747-11	FUSE, GLASS TUBE 5A 125V (GX67ES)	
F972	⚠ 1-532-746-11	FUSE, GLASS TUBE 4A 125V (GX57ES)	
F972	⚠ 1-532-747-11	FUSE, GLASS TUBE 5A 125V (GX67ES)	
F973	⚠ 1-532-749-11	FUSE, GLASS TUBE 8A 125V (US)	
F974	⚠ 1-532-749-11	FUSE, GLASS TUBE 8A 125V (US)	
G951	* 4-904-446-01	PLATE, GROUND	
T902	⚠ 1-450-535-11	TRANSFORMER, POWER (GX57ES:US)	
T902	⚠ 1-450-536-11	TRANSFORMER, POWER (GX67ES)	
T902	⚠ 1-450-672-11	TRANSFORMER, POWER (GX57ES:Canadian)	

SECTION 5
ELECTRICAL PARTS LIST

DISPLAY

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- —XX, —X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms
  METAL : Metal-film resistor
  METAL OXIDE : Metal Oxide-film resistor
  F : nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u : μ, for example :
  uA.... : μA...., uPA.... : μPA....
  uPB.... : μPB...., uPC.... : μPC....
  uPD.... : μPD....
- CAPACITORS
  uF : μF
- COILS
  uH : μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

Ref. No.	Part No.	Description			Remark
*	A-4345-793-A	DISPLAY BOARD, COMPLETE (GX57ES)			
*	A-4341-900-A	DISPLAY BOARD, COMPLETE (GX67ES)			
		**********			
*	4-934-443-01	HOLDER (FL TUBE)			
*	4-945-301-01	HOLDER, LED (D140-142, D144-147)			
*	4-945-302-01	HOLDER (1), LED (D143, D148)			
*	4-945-305-01	CUSHION (FL TUBE)			
		< CAPACITOR >			
C101	1-124-903-11	ELECT	1uF	20%	50V
C102	1-136-157-00	FILM	0.022uF	5%	50V
C103	1-125-486-11	DUBLE LAYERS	0.22F		5.5V
C104	1-136-165-00	FILM	0.1uF	5%	50V
C105	1-124-907-11	ELECT	10uF	20%	50V
C106	1-124-903-11	ELECT	1uF	20%	50V
C107	1-136-169-00	FILM	0.22uF	5%	50V
C109	1-164-097-11	CERAMIC	0.022uF		50V
C110	1-164-097-11	CERAMIC	0.022uF		50V
C112	1-124-443-00	ELECT	100uF	20%	10V
C113	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
		< VIBRATOR >			
CF104	1-577-101-11	VIBRATOR, CERAMIC (4.19MHz)			
		< CONNECTOR >			
CNS101	* 1-565-480-11	CONNECTOR, BOARD TO BOARD 4P			
CNS102	* 1-561-651-00	SOCKET, CONNECTOR 7P			
CNS104	* 1-568-867-11	SOCKET, CONNECTOR 25P			
CNS105	* 1-568-848-11	SOCKET, CONNECTOR 5P			
		< DIODE >			
D103	8-719-988-62	DIODE 1SS355			
D104	8-719-988-62	DIODE 1SS355			
D105	8-719-988-62	DIODE 1SS355			
D106	8-719-988-62	DIODE 1SS355			
D107	8-719-988-62	DIODE 1SS355			
D108	8-719-988-62	DIODE 1SS355			
D109	8-719-988-62	DIODE 1SS355			
D110	8-719-988-62	DIODE 1SS355			
D140	8-719-301-52	LED SEL2810A-C (HALL)			
D141	8-719-301-52	LED SEL2810A-C (SIMULATED)			
D142	8-719-301-52	LED SEL2810A-C (TAPE MONITOR)			
D143	8-719-301-52	LED SEL2810A-C (-20dB)			
D144	8-719-301-52	LED SEL2810A-C (PHANTOM)			
D145	8-719-301-52	LED SEL2810A-C (NORMAL)			
D146	8-719-301-52	LED SEL2810A-C (WIDE)			
D147	8-719-301-52	LED SEL2810A-C (3CH)			
D148	8-719-301-52	LED SEL2810A-C (AUTO INPUT BALANCE)			
D160	8-719-988-62	DIODE 1SS355			
D161	8-719-988-62	DIODE 1SS355			
		< INDICATOR >			
FL101	1-519-645-11	INDICATOR TUBE, FLUORESCENT			
		< IC >			
IC101	8-752-832-79	IC CXP50116-248Q			
IC102	8-759-801-57	IC LB1494			
IC103	8-749-920-83	IC GP1U52XB			
IC104	8-759-820-62	IC LB1639			
		< COIL >			
L101	1-410-381-11	INDUCTOR CHIP 10uH			
		< TRANSISTOR >			
Q140	8-729-620-05	TRANSISTOR 2SC2603-EF			
Q141	8-729-620-05	TRANSISTOR 2SC2603-EF			
Q142	8-729-620-05	TRANSISTOR 2SC2603-EF			
Q143	8-729-620-05	TRANSISTOR 2SC2603-EF			
Q144	8-729-620-05	TRANSISTOR 2SC2603-EF			

DISPLAY

Ref. No.	Part No.	Description				Remark
Q145	8-729-620-05	TRANSISTOR	2SC2603-EF			
Q146	8-729-119-76	TRANSISTOR	2SA1175-HFE			
Q147	8-729-119-76	TRANSISTOR	2SA1175-HFE			
Q148	8-729-900-36	TRANSISTOR	DTC124ES			
		< RESISTOR >				
R101	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R105	1-216-025-00	METAL CHIP	100	5%	1/10W	
R106	1-216-025-00	METAL CHIP	100	5%	1/10W	
R109	1-216-025-00	METAL CHIP	100	5%	1/10W	
R111	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R112	1-216-073-00	METAL CHIP	10K	5%	1/10W	
R113	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R114	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R121	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R122	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R123	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R124	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R125	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R126	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R127	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R128	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R129 ⚠	1-249-389-11	CARBON	4.7	5%	1/4W (GX57ES)	
R129 ⚠	1-249-392-11	CARBON	8.2	5%	1/4W (GX67ES)	
R130 ⚠	1-249-389-11	CARBON	4.7	5%	1/4W (GX57ES)	
R130 ⚠	1-249-392-11	CARBON	8.2	5%	1/4W (GX67ES)	
R131	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R132	1-216-037-00	METAL CHIP	330	5%	1/10W	
R133	1-216-037-00	METAL CHIP	330	5%	1/10W	
R134	1-216-037-00	METAL CHIP	330	5%	1/10W	
R135	1-216-037-00	METAL CHIP	330	5%	1/10W	
R136	1-216-037-00	METAL CHIP	330	5%	1/10W	
R137	1-216-037-00	METAL CHIP	330	5%	1/10W	
R138	1-216-037-00	METAL CHIP	330	5%	1/10W	
R139	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R140	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	
R141	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	
R142	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	
R143	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	
R144	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	
R145	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	
R146	1-216-041-00	METAL CHIP	470	5%	1/10W	
R147	1-216-019-00	METAL CHIP	56	5%	1/10W	
R148	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	
R149	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R150	1-216-059-00	METAL CHIP	2.7K	5%	1/10W	
R151	1-216-019-00	METAL CHIP	56	5%	1/10W	
R152	1-216-041-00	METAL CHIP	470	5%	1/10W	
R153	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
R154	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R155	1-216-089-00	METAL CHIP	47K	5%	1/10W	
R158	1-216-097-00	METAL CHIP	100K	5%	1/10W	
R171	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R172	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R173	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R174	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R175	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R176	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R177	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R178	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R179	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R180	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R181	1-216-017-00	METAL CHIP	47	5%	1/10W	
R182	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R183	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R184	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R185	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R186	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R187	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R188	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R189	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R190	1-216-049-00	METAL CHIP	1K	5%	1/10W	
R621	1-216-065-00	METAL CHIP	4.7K	5%	1/10W	
		< SWITCH >				
S101	1-554-303-21	SWITCH, TACTILE	(7)			
S102	1-554-303-21	SWITCH, TACTILE	(8)			
S103	1-554-303-21	SWITCH, TACTILE	(9)			
S104	1-554-303-21	SWITCH, TACTILE	(0)			
S105	1-554-303-21	SWITCH, TACTILE	(MEMORY)			
S106	1-554-303-21	SWITCH, TACTILE	(4)			
S107	1-554-303-21	SWITCH, TACTILE	(5)			
S108	1-554-303-21	SWITCH, TACTILE	(6)			
S109	1-554-303-21	SWITCH, TACTILE	(SHIFT)			
S110	1-554-303-21	SWITCH, TACTILE	(1)			
S111	1-554-303-21	SWITCH, TACTILE	(2)			
S112	1-554-303-21	SWITCH, TACTILE	(3)			
S113	1-554-303-21	SWITCH, TACTILE	(CENTER -)			
S114	1-554-303-21	SWITCH, TACTILE	(FM MODE)			
S115	1-554-303-21	SWITCH, TACTILE	(PRESET TUNING +)			
S116	1-554-303-21	SWITCH, TACTILE	(TAPE MONITOR ON/OFF)			
S117	1-554-303-21	SWITCH, TACTILE	(DAT)			
S118	1-554-303-21	SWITCH, TACTILE	(CENTER +)			
S119	1-554-303-21	SWITCH, TACTILE	(PROLOGIC MODE)			
S120	1-554-303-21	SWITCH, TACTILE	(FM TUNE MODE)			

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
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Ne les remplacer que par une pièce portant le numéro spécifié.

DISPLAY | IMP SW | MAIN

Ref. No.	Part No.	Description	Remark
S121	1-554-303-21	SWITCH, TACTILE (PRESET TUNING -)	
S122	1-554-303-21	SWITCH, TACTILE (VIDEO)	
S123	1-554-303-21	SWITCH, TACTILE (CD)	
S124	1-554-303-21	SWITCH, TACTILE (REAR -)	
S125	1-554-303-21	SWITCH, TACTILE (DELAY)	
S126	1-554-303-21	SWITCH, TACTILE (FM)	
S127	1-554-303-21	SWITCH, TACTILE (TUNING +)	
S128	1-554-303-21	SWITCH, TACTILE (VIDEO2/LD)	
S129	1-554-303-21	SWITCH, TACTILE (TUNER)	
S130	1-554-303-21	SWITCH, TACTILE (REAR +)	
S131	1-554-303-21	SWITCH, TACTILE (SURROUND MODE)	
S132	1-554-303-21	SWITCH, TACTILE (AM)	
S133	1-554-303-21	SWITCH, TACTILE (TUNING -)	
S134	1-554-303-21	SWITCH, TACTILE (TAPE)	
S135	1-554-303-21	SWITCH, TACTILE (PHONO)	
S136	1-554-303-21	SWITCH, TACTILE (MUTTING)	
S137	1-554-303-21	SWITCH, TACTILE (SURROUND ON/OFF)	
		**********	
	* 1-640-131-11	IMP SW BOARD (Canadian)	
	* 1-641-425-11	IMP SW BOARD (US)	
		**********	
	1-533-225-11	HOLDER, FUSE (US)	
		< CONNECTOR >	
CNP952	* 1-564-242-00	PIN, CONNECTOR 5P	
		< SWITCH >	
S951	⚠ 1-571-309-31	SWITCH (SP IMP SELECTOR)	
		**********	
	* A-4341-908-A	MAIN BOARD, COMPLETE (GX67ES:US)	
	* A-4341-914-A	MAIN BOARD, COMPLETE (GX67ES:Canadian)	
	* A-4341-922-A	MAIN BOARD, COMPLETE (GX57ES:US)	
	* A-4341-925-A	MAIN BOARD, COMPLETE (GX57ES:Canadian)	
		**********	
	1-533-225-11	HOLDER, FUSE	
	* 4-880-403-11	HEAT SINK	
	* 4-931-903-01	HEAT SINK (DI)	
		< CAPACITOR >	

Ref. No.	Part No.	Description			Remark
C111	1-124-907-11	ELECT	10uF	20%	50V
C112	1-124-925-11	ELECT	2.2uF	20%	100V
C113	1-136-165-11	CERAMIC	0.01uF	5%	50V
C114	1-124-927-11	ELECT	4.7uF	20%	100V
C162	1-124-925-11	ELECT	2.2uF	20%	100V
C501	1-162-282-31	CERAMIC	100PF	10%	50V
C502	1-124-927-11	ELECT	4.7uF	20%	100V
C503	1-124-034-51	ELECT	33uF	20%	16V
C504	1-130-480-00	MYLAR	0.0056uF	5%	50V
C505	1-106-347-00	MYLAR	1500PF	5%	200V
C506	1-124-903-11	ELECT	1uF	20%	50V
C507	1-124-477-11	ELECT	47uF	20%	25V
C509	1-164-097-11	CERAMIC	0.022uF		50V
C530	1-124-903-11	ELECT	1uF	20%	50V
C551	1-162-282-31	CERAMIC	100PF	10%	50V
C552	1-124-927-11	ELECT	4.7uF	20%	100V
C553	1-124-034-51	ELECT	33uF	20%	16V
C554	1-130-480-00	MYLAR	0.0056uF	5%	50V
C555	1-106-347-00	MYLAR	1500PF	5%	200V
C556	1-124-903-11	ELECT	1uF	20%	50V
C557	1-124-477-11	ELECT	47uF	20%	25V
C580	1-124-903-11	ELECT	1uF	20%	50V
C701	1-164-077-11	CERAMIC	220PF	10%	50V
C702	1-124-927-11	ELECT	4.7uF	20%	100V
C703	1-102-989-00	CERAMIC	68PF	5%	500V
C704	1-124-122-11	ELECT	100uF	20%	50V
C705	1-164-039-11	CERAMIC	3PF	0.25PF	50V
C706	1-124-927-11	ELECT	4.7uF	20%	100V
C708	1-102-316-00	CERAMIC	15PF	5%	500V
C709	1-124-910-11	ELECT	47uF	20%	50V
C710	1-102-233-00	CERAMIC	33PF	10%	500V
C711	1-102-233-00	CERAMIC	33PF	10%	500V
C712	1-136-165-00	FILM	0.1uF	5%	50V
C713	1-136-165-00	FILM	0.1uF	5%	50V
C714	1-136-165-00	FILM	0.1uF	5%	50V
C715	1-124-472-11	ELECT	470uF	20%	10V
C716	1-136-157-00	FILM	0.022uF	5%	50V (US)
C716	1-136-161-00	FILM	0.047uF	5%	50V (Canadian)
C717	1-136-161-00	FILM	0.047uF	5%	50V
C718	1-164-085-11	CERAMIC	0.001uF	10%	50V
C720	1-124-903-11	ELECT	1uF	20%	50V
C740	1-124-907-11	ELECT	10uF	20%	50V
C741	1-124-907-11	ELECT	10uF	20%	50V
C742	1-124-907-11	ELECT	10uF	20%	50V
C743	1-124-902-00	ELECT	0.47uF	20%	50V
C744	1-124-477-11	ELECT	47uF	20%	25V
C751	1-164-077-11	CERAMIC	220PF	10%	50V
C752	1-124-927-11	ELECT	4.7uF	20%	100V
C753	1-102-989-00	CERAMIC	68PF	5%	500V
C754	1-124-122-11	ELECT	100uF	20%	50V
C755	1-164-039-11	CERAMIC	3PF	0.25PF	50V
C756	1-124-927-11	ELECT	4.7uF	20%	100V
C758	1-102-316-00	CERAMIC	15PF	5%	500V

Note:
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Replace only with part number specified.

Note:
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Ne les remplacer que par une pièce portant le numéro spécifié.

MAIN

Ref. No.	Part No.	Description			Remark
C759	1-124-910-11	ELECT	47uF	20%	50V
C760	1-102-233-00	CERAMIC	33PF	10%	500V
C761	1-102-233-00	CERAMIC	33PF	10%	500V
C762	1-136-165-00	FILM	0.1uF	5%	50V
C763	1-136-165-00	FILM	0.1uF	5%	50V
C766	1-136-157-00	FILM	0.022uF	5%	50V (US)
C766	1-136-161-00	FILM	0.047uF	5%	50V (Canadian)
C767	1-136-161-00	FILM	0.047uF	5%	50V
C790	1-124-907-11	ELECT	10uF	20%	50V
C791	1-124-907-11	ELECT	10uF	20%	50V
C792	1-124-907-11	ELECT	10uF	20%	50V
C793	1-124-902-00	ELECT	0.47uF	20%	50V
C970	1-124-907-11	ELECT	10uF	20%	50V
C971	1-124-907-11	ELECT	10uF	20%	50V
C972	1-124-915-11	ELECT	10uF	20%	63V
C974	1-124-618-11	ELECT	2200uF	20%	35V
C975	1-126-104-11	ELECT	470uF	20%	35V
C976	1-124-477-11	ELECT	47uF	20%	25V
C977	1-124-477-11	ELECT	47uF	20%	25V
C978	1-161-379-00	CERAMIC	0.01uF	20%	25V
C979	1-161-379-00	CERAMIC	0.01uF	20%	25V
C980	1-102-394-11	CERAMIC	0.01uF		250V
C981	1-102-394-11	CERAMIC	0.01uF		250V
C982	1-102-394-11	CERAMIC	0.01uF		250V
C983	1-102-394-11	CERAMIC	0.01uF		250V
C984	1-124-922-11	ELECT	1000uF	20%	63V
C985	1-124-922-11	ELECT	1000uF	20%	63V
C986	1-125-677-11	ELECT	10000uF	20%	63V (GX67ES)
C987	1-125-677-11	ELECT	10000uF	20%	63V (GX67ES)
C992	1-126-955-11	ELECT	4700uF	20%	35V
C993	1-126-955-11	ELECT	4700uF	20%	35V
C994	1-164-096-11	CERAMIC	0.01uF		50V
C995	1-164-096-11	CERAMIC	0.01uF		50V
C996	1-164-096-11	CERAMIC	0.01uF		50V
C997	1-164-096-11	CERAMIC	0.01uF		50V
C998	1-161-379-00	CERAMIC	0.01uF	20%	25V
C999	1-124-477-11	ELECT	47uF	20%	25V

< CONNECTOR >

CNJ501	1-565-320-11	JACK, PIN 6P (PHONO IN, CD IN, DAT OUT)
CNJ502	1-565-320-11	JACK, PIN 6P (VIDEO1 IN/OUT, VIDEO2 LD IN)
CNJ503	1-565-320-11	JACK, PIN 6P (DAT IN, TAPE IN/OUT)
CNJ504	1-565-258-11	JACK, PIN 4P (TAPE MONITOR IN/OUT)
CNJ505	1-565-258-11	JACK, PIN 4P (ADAPTOR IN/OUT)
CNP1 *	1-573-192-11	CONNECTOR, BOARD TO BOARD 13P
CNP301 *	1-573-192-11	CONNECTOR, BOARD TO BOARD 13P
CNP302 *	1-573-192-11	CONNECTOR, BOARD TO BOARD 13P
CNP402 *	1-564-509-11	PLUG, CONNECTOR 6P
CNP404 *	1-564-508-11	PLUG, CONNECTOR 5P
CNP506 *	1-564-509-11	PLUG, CONNECTOR 6P
CNP508 *	1-564-507-11	PLUG, CONNECTOR 4P
CNP603 *	1-564-505-11	PLUG, CONNECTOR 2P
CNP701 *	1-560-063-00	PIN, CONNECTOR 5P
CNP951 *	1-564-104-00	PIN, CONNECTOR (B3P-VH) 3P
CNS106 *	1-568-841-11	SOCKET, CONNECTOR 25P
CNS203 *	1-568-828-11	SOCKET, CONNECTOR 9P

< DIODE >

D150	8-719-912-20	DIODE	1SS120
D151	8-719-912-20	DIODE	1SS120
D153	8-719-912-20	DIODE	1SS120
D154	8-719-912-20	DIODE	1SS120
D701	8-719-912-20	DIODE	1SS120
D702	8-719-912-20	DIODE	1SS120
D703	8-719-912-20	DIODE	1SS120
D704	8-719-912-20	DIODE	1SS120
D710	8-719-300-04	DIODE	SV-04
D711	8-719-300-04	DIODE	SV-04
D751	8-719-912-20	DIODE	1SS120
D752	8-719-912-20	DIODE	1SS120
D753	8-719-912-20	DIODE	1SS120
D760	8-719-300-04	DIODE	SV-04
D761	8-719-300-04	DIODE	SV-04
D970	8-719-934-00	DIODE	HZS22-2L
D972	8-719-200-82	DIODE	11ES2
D973	8-719-200-82	DIODE	11ES2
D974	8-719-200-82	DIODE	11ES2
D975	8-719-200-82	DIODE	11ES2
D976	8-719-200-82	DIODE	11ES2
D977	8-719-200-82	DIODE	11ES2
D978	8-719-200-82	DIODE	11ES2
D979	8-719-200-82	DIODE	11ES2
D980	8-719-302-38	DIODE	RBV-602-01
D981	8-719-312-09	DIODE	RBA-402

< PLATE GROUND >

G701 *	4-904-446-01	PLATE, GROUND

< IC >

IC105	8-759-503-96	IC	MSM59371RS
IC501	8-759-805-14	IC	LC7822
IC502	8-759-805-14	IC	LC7822
IC503	8-759-112-93	IC	uPC4570HA-1
IC530	8-759-634-51	IC	M5218AP
IC701	8-749-920-70	IC	STK-3102-3 (GX67ES)
IC702	8-759-501-55	IC	BA6125
IC703	8-759-634-50	IC	M5218AL

MAIN

Ref. No.	Part No.	Description	Remark
IC752	8-759-501-55	IC BA6125	
IC952	8-759-604-39	IC M5F78M12L	
IC953	8-759-604-45	IC M5F79M12L	
IC954	8-759-604-35	IC M5F78M05L	
		< PHOTO INTERRUPTER >	
PH701	8-719-946-27	DIODE PC837	
PH751	8-719-946-27	DIODE PC837	
		< TRANSISTOR >	
Q110	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q113	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q114	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q115	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q116	8-729-900-36	TRANSISTOR DTC124ES	
Q150	8-729-900-63	TRANSISTOR DTA124ES	
Q163	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q164	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q165	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q530	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q580	8-729-141-30	TRANSISTOR 2SC3623A-LK	
Q701	8-729-209-15	TRANSISTOR 2SD2012	
Q702	8-729-141-46	TRANSISTOR 2SC4431-LK	
Q703	8-729-141-37	TRANSISTOR 2SA1684-LK	
Q704	8-729-320-71	TRANSISTOR 2SC3856-OY (GX57ES)	
Q704	8-729-320-96	TRANSISTOR 2SC2921-OPY (GX67ES)	
Q705	8-729-320-72	TRANSISTOR 2SA1492-OY (GX57ES)	
Q705	8-729-320-73	TRANSISTOR 2SA1215-OY (GX67ES)	
Q706	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q707	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q708	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	
Q709	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q710	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q711	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q751	8-729-209-15	TRANSISTOR 2SD2012	
Q752	8-729-141-46	TRANSISTOR 2SC4431-LK	
Q753	8-729-141-37	TRANSISTOR 2SA1684-LK	
Q754	8-729-320-71	TRANSISTOR 2SC3856-OY (GX57ES)	
Q754	8-729-320-96	TRANSISTOR 2SC2921-OPY (GX67ES)	
Q755	8-729-320-72	TRANSISTOR 2SA1492-OY (GX57ES)	
Q755	8-729-320-73	TRANSISTOR 2SA1215-OY (GX67ES)	
Q756	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q757	8-729-140-82	TRANSISTOR 2SA988-PAFAEA	
Q970	8-729-141-06	TRANSISTOR 2SA1142-QPE	

Ref. No.	Part No.	Description			Remark
		< RESISTOR >			
R110	1-249-429-11	CARBON	10K	5%	1/4W
R111	1-249-429-11	CARBON	10K	5%	1/4W
R113	1-249-415-11	CARBON	680	5%	1/4W
R114	1-249-441-11	CARBON	100K	5%	1/4W
R115	1-249-441-11	CARBON	100K	5%	1/4W
R116	1-249-425-11	CARBON	4.7K	5%	1/4W
R118	1-249-441-11	CARBON	100K	5%	1/4W
R119	1-249-437-11	CARBON	47K	5%	1/4W
R120	1-249-429-11	CARBON	10K	5%	1/4W
R160	1-249-437-11	CARBON	47K	5%	1/4W
R161	1-249-437-11	CARBON	47K	5%	1/4W
R162	1-249-437-11	CARBON	47K	5%	1/4W
R163	1-249-415-11	CARBON	680	5%	1/4W
R164	1-249-421-11	CARBON	2.2K	5%	1/4W
R166	1-249-425-11	CARBON	4.7K	5%	1/4W
R170	1-249-417-11	CARBON	1K	5%	1/4W
R501	1-249-411-11	CARBON	330	5%	1/4W
R502	1-249-417-11	CARBON	1K	5%	1/4W
R503	1-249-417-11	CARBON	1K	5%	1/4W
R504	1-249-417-11	CARBON	1K	5%	1/4W
R505	1-249-417-11	CARBON	1K	5%	1/4W
R506	1-249-437-11	CARBON	47K	5%	1/4W
R507	1-249-421-11	CARBON	2.2K	5%	1/4W
R508	1-249-435-11	CARBON	33K	5%	1/4W
R509	1-249-417-11	CARBON	1K	5%	1/4W
R510	1-249-417-11	CARBON	1K	5%	1/4W
R511	1-249-417-11	CARBON	1K	5%	1/4W
R512	1-249-437-11	CARBON	47K	5%	1/4W
R514	1-249-417-11	CARBON	1K	5%	1/4W
R515	1-249-437-11	CARBON	47K	5%	1/4W
R517	1-249-417-11	CARBON	1K	5%	1/4W
R520	1-249-421-11	CARBON	2.2K	5%	1/4W
R521	1-249-435-11	CARBON	33K	5%	1/4W
R523	1-249-437-11	CARBON	47K	5%	1/4W
R524	1-249-441-11	CARBON	100K	5%	1/4W
R525	1-249-417-11	CARBON	1K	5%	1/4W
R526	1-247-897-11	CARBON	560K	5%	1/4W
R527	1-249-437-11	CARBON	47K	5%	1/4W
R528	1-249-417-11	CARBON	1K	5%	1/4W
R529	1-249-441-11	CARBON	100K	5%	1/4W
R530	1-249-405-11	CARBON	100	5%	1/4W
R531	1-249-405-11	CARBON	100	5%	1/4W
R532	1-249-437-11	CARBON	47K	5%	1/4W
R533	1-249-437-11	CARBON	47K	5%	1/4W
R534	1-249-425-11	CARBON	4.7K	5%	1/4W

MAIN

Ref. No.	Part No.	Description			Remark
R535	1-249-437-11	CARBON	47K	5%	1/4W
R536	1-249-417-11	CARBON	1K	5%	1/4W
R537	1-249-437-11	CARBON	47K	5%	1/4W
R551	1-249-411-11	CARBON	330	5%	1/4W
R552	1-249-417-11	CARBON	1K	5%	1/4W
R553	1-249-417-11	CARBON	1K	5%	1/4W
R554	1-249-417-11	CARBON	1K	5%	1/4W
R555	1-249-417-11	CARBON	1K	5%	1/4W
R556	1-249-437-11	CARBON	47K	5%	1/4W
R557	1-249-421-11	CARBON	2.2K	5%	1/4W
R558	1-249-435-11	CARBON	33K	5%	1/4W
R559	1-249-417-11	CARBON	1K	5%	1/4W
R560	1-249-417-11	CARBON	1K	5%	1/4W
R561	1-249-417-11	CARBON	1K	5%	1/4W
R562	1-249-437-11	CARBON	47K	5%	1/4W
R564	1-249-417-11	CARBON	1K	5%	1/4W
R565	1-249-437-11	CARBON	47K	5%	1/4W
R567	1-249-417-11	CARBON	1K	5%	1/4W
R570	1-249-421-11	CARBON	2.2K	5%	1/4W
R571	1-249-435-11	CARBON	33K	5%	1/4W
R573	1-249-437-11	CARBON	47K	5%	1/4W
R574	1-249-441-11	CARBON	100K	5%	1/4W
R575	1-249-417-11	CARBON	1K	5%	1/4W
R576	1-247-897-11	CARBON	560K	5%	1/4W
R577	1-249-437-11	CARBON	47K	5%	1/4W
R578	1-249-417-11	CARBON	1K	5%	1/4W
R579	1-249-441-11	CARBON	100K	5%	1/4W
R580	1-249-405-11	CARBON	100	5%	1/4W
R581	1-249-405-11	CARBON	100	5%	1/4W
R582	1-249-437-11	CARBON	47K	5%	1/4W
R583	1-249-437-11	CARBON	47K	5%	1/4W
R585	1-249-437-11	CARBON	47K	5%	1/4W
R586	1-249-417-11	CARBON	1K	5%	1/4W
R587	1-249-437-11	CARBON	47K	5%	1/4W
R701	1-249-417-11	CARBON	1K	5%	1/4W
R702	1-247-878-00	CARBON	91K	5%	1/4W
R703	1-249-413-11	CARBON	470	5%	1/4W(GX67ES)
R704	1-249-413-11	CARBON	470	5%	1/4W
R705	1-249-441-11	CARBON	100K	5%	1/4W
R706	1-249-417-11	CARBON	1K	5%	1/4W
R708	1-249-412-11	CARBON	390	5%	1/4W
R709 ⚠	1-247-704-11	CARBON	220	5%	1/4W
R710 ⚠	1-249-455-11	CARBON	4.7	5%	1/4W
R711 ⚠	1-249-455-11	CARBON	4.7	5%	1/4W
R712 ⚠	1-214-789-00	RES, METAL PLATE 0.1		10%	5W
R713 ⚠	1-214-789-00	RES, METAL PLATE 0.1		10%	5W
R714	1-249-422-11	CARBON	2.7K	5%	1/4W
R716	1-249-431-11	CARBON	15K	5%	1/4W
R717	1-249-422-11	CARBON	2.7K	5%	1/4W

Ref. No.	Part No.	Description			Remark
R718	1-249-431-11	CARBON	15K	5%	1/4W
R719	1-249-433-11	CARBON	22K	5%	1/4W
R721	1-260-076-11	CARBON	10	5%	1/2W
R722	1-249-425-11	CARBON	4.7K	5%	1/4W
R723	1-249-437-11	CARBON	47K	5%	1/4W
R724 ⚠	1-247-688-11	CARBON	10	5%	1/4W
R725 ⚠	1-247-688-11	CARBON	10	5%	1/4W
R730	1-249-429-11	CARBON	10K	5%	1/4W
R731	1-249-437-11	CARBON	47K	5%	1/4W
R732	1-249-417-11	CARBON	1K	5%	1/4W
R733	1-249-436-11	CARBON	39K	5%	1/4W
R740	1-249-429-11	CARBON	10K	5%	1/4W
R741	1-249-427-11	CARBON	6.8K	5%	1/4W
R742	1-247-848-11	CARBON	5.1K	5%	1/4W
R743	1-249-432-11	CARBON	18K	5%	1/4W
R744	1-249-441-11	CARBON	100K	5%	1/4W
R745	1-249-429-11	CARBON	10K	5%	1/4W
R746	1-249-417-11	CARBON	1K	5%	1/4W
R747	1-249-427-11	CARBON	6.8K	5%	1/4W
R748	1-249-441-11	CARBON	100K	5%	1/4W
R749	1-249-441-11	CARBON	100K	5%	1/4W
R751	1-249-417-11	CARBON	1K	5%	1/4W
R752	1-247-878-00	CARBON	91K	5%	1/4W
R753	1-249-413-11	CARBON	470	5%	1/4W(GX67ES)
R754	1-249-413-11	CARBON	470	5%	1/4W
R755	1-249-441-11	CARBON	100K	5%	1/4W
R756	1-249-417-11	CARBON	1K	5%	1/4W
R758	1-249-412-11	CARBON	390	5%	1/4W
R759 ⚠	1-247-704-11	CARBON	220	5%	1/4W
R760 ⚠	1-249-455-11	CARBON	4.7	5%	1/4W
R761 ⚠	1-249-455-11	CARBON	4.7	5%	1/4W
R762 ⚠	1-214-789-00	RES, METAL PLATE 0.1		10%	5W
R763 ⚠	1-214-789-00	RES, METAL PLATE 0.1		10%	5W
R764	1-249-422-11	CARBON	2.7K	5%	1/4W
R766	1-249-431-11	CARBON	15K	5%	1/4W
R767	1-249-422-11	CARBON	2.7K	5%	1/4W
R768	1-249-431-11	CARBON	15K	5%	1/4W
R769	1-249-434-11	CARBON	27K	5%	1/4W
R771	1-260-076-11	CARBON	10	5%	1/2W
R774	1-247-688-11	CARBON	10	5%	1/4W
R775	1-249-393-11	CARBON	10	5%	1/4W
R790	1-249-429-11	CARBON	10K	5%	1/4W
R791	1-249-427-11	CARBON	6.8K	5%	1/4W
R792	1-247-848-11	CARBON	5.1K	5%	1/4W
R793	1-249-432-11	CARBON	18K	5%	1/4W
R794	1-249-441-11	CARBON	100K	5%	1/4W
R795	1-249-429-11	CARBON	10K	5%	1/4W
R796	1-249-417-11	CARBON	1K	5%	1/4W
R797	1-249-427-11	CARBON	6.8K	5%	1/4W

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

MAIN

MOTOR VOLUME | POWER SUPPLY | TRANSFORMER TERMINAL(A)

Ref. No.	Part No.	Description				Remark
R798	1-249-441-11	CARBON	100K	5%	1/4W	
R799	1-249-441-11	CARBON	100K	5%	1/4W	
R970	1-249-429-11	CARBON	10K	5%	1/4W	
R971 ⚠	1-247-752-11	CARBON	1K	5%	1/2W	F
R974 ⚠	1-212-958-00	FUSIBLE	10	5%	1/2W	F (Canadian)
R974	1-212-970-00	FUSIBLE	33	5%	1/2W	F (US)
R975 ⚠	1-212-958-00	FUSIBLE	10	5%	1/2W	F (Canadian)
R975	1-212-970-00	FUSIBLE	33	5%	1/2W	F (US)
R976	1-249-385-11	CARBON	2.2	5%	1/6W	
R977	1-249-385-11	CARBON	2.2	5%	1/6W	
R978	1-249-385-11	CARBON	2.2	5%	1/6W	
R979 ⚠	1-216-448-11	METAL OXIDE	39	5%	2W	F
R980 ⚠	1-216-448-11	METAL OXIDE	39	5%	2W	F
R981 ⚠	1-216-448-11	METAL OXIDE	39	5%	2W	F
R982 ⚠	1-216-448-11	METAL OXIDE	39	5%	2W	F
R988 ⚠	1-215-882-00	METAL OXIDE	22	5%	2W	F
		< VARIABLE RESISTOR >				
RV701	1-238-011-11	RES, ADJ, CARBON 470 (BIAS)				
RV751	1-238-011-11	RES, ADJ, CARBON 470 (BIAS)				
		< RELAY >				
RY501	1-515-726-11	RELAY				
		< TEST PIN >				
TP701 *	1-560-062-00	PIN, CONNECTOR 4P (BIAS)				
**********						
*	1-640-137-11	MOTOR VOLUME BOARD				
		**********				
		< CAPACITOR >				
C410	1-124-273-00	ELECT	3.3uF	20%	50V	
C411	1-162-294-31	CERAMIC	0.001uF	10%	50V	
		< CONNECTOR >				
CNP401	1-560-943-00	PIN, CONNECTOR 9P				
CNP501 *	1-564-509-11	PLUG, CONNECTOR 6P				
CNP505 *	1-564-513-11	PLUG, CONNECTOR 10P				
CNS401	1-562-088-00	SOCKET, CONNECTOR 9P				
CNS402 *	1-568-824-11	SOCKET, CONNECTOR 5P				
		< RESISTOR >				
R414	1-249-410-11	CARBON	270	5%	1/4W	

Ref. No.	Part No.	Description	Remark
		< VARIABLE RESISTOR >	
RV404	1-241-540-11	RES, VAR, CARBON 120KX4 (ATTENUATOR)	
**********			
*	A-4341-905-A	POWER SUPPLY BOARD, COMPLETE	
		**********	
*	1-640-132-11	TRANSFORMER TARMINAL (A) BOARD (GX67ES)	
*	1-640-133-11	TRANSFORMER TARMINAL (A) BOARD (GX57ES)	
		**********	
	1-533-225-11	HOLDER, FUSE	
*	3-309-144-21	HEAT SINK	
		< BASE POST >	
BP951 *	1-535-139-00	BASE POST 19MM (10MM PITCH) 2P	
		< CAPACITOR >	
C901 ⚠	1-161-744-00	CERAMIC 0.01uF	400V
C951	1-101-004-00	CERAMIC 0.01uF	50V
C952	1-101-004-00	CERAMIC 0.01uF	50V
C953	1-164-073-11	CERAMIC 100PF 10%	50V
C954	1-124-907-11	ELECT 10uF 20%	50V
C955	1-124-477-11	ELECT 47uF 20%	25V
C956	1-124-464-11	ELECT 0.22uF 20%	50V
C957	1-124-902-00	ELECT 0.47uF 20%	50V
C958	1-101-004-00	CERAMIC 0.01uF	50V
C959	1-124-557-11	ELECT 1000uF 20%	25V
C960	1-124-903-11	ELECT 1uF 20%	50V
		< CONNECTOR >	
CNP901 *	1-564-321-00	PIN, CONNECTOR 2P	
CNP902 *	1-580-629-11	PIN, CONNECTOR 2P	
CNS901	1-540-060-11	OUTLET, AC (POLAR)	
CNS951 *	1-568-824-11	SOCKET, CONNECTOR 5P	
		< DIODE >	
D951	8-719-912-20	DIODE 1SS120	
D952	8-719-912-20	DIODE 1SS120	
D953	8-719-912-20	DIODE 1SS120	
D954	8-719-200-82	DIODE 11ES2	
D955	8-719-200-82	DIODE 11ES2	
D956	8-719-200-82	DIODE 11ES2	
D957	8-719-200-82	DIODE 11ES2	
D958	8-719-933-41	DIODE HZS6C3L	
D959	8-719-914-11	DIODE HZ4ALL	
D960	8-719-912-20	DIODE 1SS120	
D961	8-719-933-41	DIODE HZS6C3L	

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

POWER SUPPLY　TRANSFORMER TERMINAL(A)

POWER SW　SPEAKER SW　SPEAKER TERMINAL

Ref. No.	Part No.	Description			Remark
		< PLATE GROUND >			
G951	* 4-904-446-01	PLATE, GROUND			
		< TRANSISTOR >			
Q952	8-729-620-05	TRANSISTOR	2SC2603-EF		
Q953	8-729-209-15	TRANSISTOR	2SD2012		
Q954	8-729-620-05	TRANSISTOR	2SC2603-EF		
Q955	8-729-119-76	TRANSISTOR	2SA1175-HFE		
Q956	8-729-119-76	TRANSISTOR	2SA1175-HFE		
Q957	8-729-900-63	TRANSISTOR	DTA124ES		
Q958	8-729-620-05	TRANSISTOR	2SC2603-EF		
Q959	8-729-900-89	TRANSISTOR	DTC144ES		
		< RESISTOR >			
R901 ⚠	1-202-725-00	SOLID	3.3M	10% 1/2W	
R951	1-247-691-11	CARBON	18	5% 1/4W	
R952	1-249-417-11	CARBON	1K	5% 1/4W	
R954	1-249-433-11	CARBON	22K	5% 1/4W	
R955	1-249-437-11	CARBON	47K	5% 1/4W	
R956	1-249-425-11	CARBON	4.7K	5% 1/4W	
R957	1-249-429-11	CARBON	10K	5% 1/4W	
R958	1-249-417-11	CARBON	1K	5% 1/4W	
R959	1-249-429-11	CARBON	10K	5% 1/4W	
R960	1-249-429-11	CARBON	10K	5% 1/4W	
R962	1-249-426-11	CARBON	5.6K	5% 1/4W	
R963	1-249-417-11	CARBON	1K	5% 1/4W	
R964	1-249-426-11	CARBON	5.6K	5% 1/4W	
R965	1-247-895-00	CARBON	470K	5% 1/4W	
		< RELAY >			
RY901 ⚠	1-515-701-11	RELAY			
		< TRANSFORMER >			
T901 ⚠	1-448-517-21	TRANSFORMER, POWER			
		< VARISTOR >			
VZ901 ⚠	1-807-293-31	VARISTOR SNR-14A221U			
**********					
	* 1-640-122-11	POWER SW BOARD			
		**********			
	* 4-924-988-11	PLATE (ST), GROUND			
		< CONNECTOR >			
CNP101 *	1-565-295-11	PLUG, CONNECTOR 4P			

Ref. No.	Part No.	Description			Remark
		< SWITCH >			
S138	1-554-303-21	SWITCH, TACTILE (POWER)			
**********					
	* 1-640-128-11	SPEAKER SW BOARD			
		**********			
		< CONNECTOR >			
CNJ701	1-573-203-11	JACK, LARGE TYPE (HEADPHONES)			
CNP102	1-569-132-11	PIN, CONNECTOR 7P			
CNP103	1-506-906-11	PIN, CONNECTOR 5P			
CNS607 *	1-568-826-11	SOCKET, CONNECTOR 7P			
CNS952 *	1-568-824-11	SOCKET, CONNECTOR 5P			
		< DIODE >			
D720	8-719-912-20	DIODE	1SS120		
D721	8-719-912-20	DIODE	1SS120		
D722	8-719-912-20	DIODE	1SS120		
D723	8-719-912-20	DIODE	1SS120		
		< TRANSISTOR >			
Q704	8-729-620-05	TRANSISTOR	2SC2603-EF		
Q741	8-729-900-36	TRANSISTOR	DTC124ES		
Q742	8-729-900-36	TRANSISTOR	DTC124ES		
		< RESISTOR >			
R623	1-249-425-11	CARBON	4.7K	5% 1/4W	
R726 ⚠	1-216-431-11	METAL OXIDE	560	5% 1W	F
R734	1-249-429-11	CARBON	10K	5% 1/4W	
R735	1-249-437-11	CARBON	47K	5% 1/4W	
R776 ⚠	1-216-431-11	METAL OXIDE	560	5% 1W	F
		< SWITCH >			
S701	1-571-973-11	SWITCH, ROTARY (SPEAKERS)			
**********					
	* 1-640-124-11	SPEAKER TERMINAL BOARD			
		**********			
		< CONNECTOR >			
CNP606 *	1-564-519-11	PLUG, CONNECTOR 4P			
CNP702 *	1-560-070-00	BASE POST 5P			
CNS604 *	1-565-480-11	CONNECTOR, BOARD TO BOARD 4P			
CNS606 *	1-568-850-11	SOCKET, CONNECTOR 7P			

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

SPEAKER TERMINAL SUB AMP

Ref. No.	Part No.	Description				Remark
		< DIODE >				
D621	8-719-912-20	DIODE	1SS120			
D622	8-719-912-20	DIODE	1SS120			
D704	8-719-912-20	DIODE	1SS120			
D705	8-719-912-20	DIODE	1SS120			
D710A	8-719-912-20	DIODE	1SS120			
D711A	8-719-912-20	DIODE	1SS120			
D712	8-719-912-20	DIODE	1SS120			
D713	8-719-912-20	DIODE	1SS120			
D714	8-719-912-20	DIODE	1SS120			
D715	8-719-912-20	DIODE	1SS120			
		< COIL >				
L701	* 1-420-872-00	COIL, AIR CORE				
L751	* 1-420-872-00	COIL, AIR CORE				
		< TRANSISTOR >				
Q621	8-729-620-05	TRANSISTOR	2SC2603-EF			
Q622	8-729-620-05	TRANSISTOR	2SC2603-EF			
Q720	8-729-620-05	TRANSISTOR	2SC2603-EF			
Q721	8-729-620-05	TRANSISTOR	2SC2603-EF			
		< RESISTOR >				
R622	1-249-437-11	CARBON	47K	5%	1/4W	
R624	1-249-437-11	CARBON	47K	5%	1/4W	
R625 ⚠	1-247-753-11	CARBON	1.2K	5%	1/2W	F
R626 ⚠	1-215-866-11	METAL OXIDE	330	5%	1W	F
R627 ⚠	1-215-866-11	METAL OXIDE	330	5%	1W	F
R720	1-260-072-11	CARBON	4.7	5%	1/2W	
R730	1-249-425-11	CARBON	4.7K	5%	1/4W	
R731	1-249-437-11	CARBON	47K	5%	1/4W	
R732	1-249-437-11	CARBON	47K	5%	1/4W	
R733	1-249-425-11	CARBON	4.7K	5%	1/4W	
R770	1-260-072-11	CARBON	4.7	5%	1/2W	
		< RELAY >				
RY701	1-515-727-11	RELAY				
RY702	1-515-741-21	RELAY				
RY703	1-515-741-21	RELAY				
		< TERMINAL >				
TM701	1-537-235-11	TERMINAL BOARD (SP) (FRONT)				

****

* A-4341-907-A SUB AMP BOARD, COMPLETE (GX67ES)
* A-4341-921-A SUB AMP BOARD, COMPLETE (GX57ES)

****

Ref. No.	Part No.	Description				Remark
		< CAPACITOR >				
C601	1-124-927-11	ELECT	4.7uF	20%	100V	
C602	1-162-282-31	CERAMIC	100PF	10%	50V	
C603	1-124-477-11	ELECT	47uF	20%	25V	
C604	1-164-096-11	CERAMIC	0.01uF		50V	
C605	1-162-191-31	CERAMIC	2.2PF	10%	50V	
C606	1-136-165-00	FILM	0.1uF	5%	50V	
C607	1-130-487-00	MYLAR	0.022uF	5%	50V	
C608	1-124-907-11	ELECT	10uF	20%	50V	
C609	1-124-907-11	ELECT	10uF	20%	50V	
C651	1-124-927-11	ELECT	4.7uF	20%	100V	(GX67ES)
C652	1-162-282-31	CERAMIC	100PF	10%	50V	(GX67ES)
C653	1-124-477-11	ELECT	47uF	20%	25V	(GX67ES)
C654	1-164-096-11	CERAMIC	0.01uF		50V	(GX67ES)
C655	1-162-191-31	CERAMIC	2.2PF	10%	50V	(GX67ES)
C656	1-136-165-00	FILM	0.1uF	5%	50V	(GX67ES)
C657	1-130-487-00	MYLAR	0.022uF	5%	50V	(GX67ES)
C658	1-124-907-11	ELECT	10uF	20%	50V	(GX67ES)
C659	1-124-907-11	ELECT	10uF	20%	50V	(GX67ES)
		< CONNECTOR >				
CNP503	* 1-564-506-11	PLUG, CONNECTOR 3P				
CNP605	* 1-564-509-11	PLUG, CONNECTOR 6P				
CNP956	* 1-564-506-11	PLUG, CONNECTOR 3P				
		< DIODE >				
D601	8-719-912-20	DIODE	1SS120			
D651	8-719-912-20	DIODE	1SS120			(GX67ES)
		< IC >				
IC601	8-759-323-30	IC	LM3875-2			
IC651	8-759-323-30	IC	LM3875-2			(GX67ES)
		< COIL >				
L601	* 1-420-872-00	COIL, AIR CORE				
L651	* 1-420-872-00	COIL, AIR CORE				(GX67ES)
		< TRANSISTOR >				
Q601	8-729-140-82	TRANSISTOR	2SA988-PAFAEA			
Q651	8-729-140-82	TRANSISTOR	2SA988-PAFAEA			(GX67ES)
		< RESISTOR >				
R601	1-249-417-11	CARBON	1K	5%	1/4W	
R602	1-249-439-11	CARBON	68K	5%	1/4W	
R603	1-249-419-11	CARBON	1.5K	5%	1/4W	
R604	1-249-439-11	CARBON	68K	5%	1/4W	
R605	1-249-421-11	CARBON	2.2K	5%	1/4W	

Note:
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Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

SUB AMP　SUB SPEAKER(A)　SUB SPEAKER(B)　TONE

Ref. No.	Part No.	Description	Remark
R606	1-249-431-11	CARBON 15K 5% 1/4W	
R607 ⚠	1-217-151-00	RES, METAL PLATE 0.22 10% 2W	
R608	1-249-389-11	CARBON 4.7 5% 1/4W	
R609 ⚠	1-249-393-11	CARBON 10 5% 1/4W	
R610	1-249-434-11	CARBON 27K 5% 1/4W	
R611	1-249-405-11	CARBON 100 5% 1/4W	
R651	1-249-417-11	CARBON 1K 5% 1/4W	(GX67ES)
R652	1-249-439-11	CARBON 68K 5% 1/4W	(GX67ES)
R653	1-249-419-11	CARBON 1.5K 5% 1/4W	(GX67ES)
R654	1-249-439-11	CARBON 68K 5% 1/4W	(GX67ES)
R655	1-249-421-11	CARBON 2.2K 5% 1/4W	(GX67ES)
R656	1-249-431-11	CARBON 15K 5% 1/4W	(GX67ES)
R657 ⚠	1-217-151-00	RES, METAL PLATE 0.22 10% 2W	(GX67ES)
R658	1-249-389-11	CARBON 4.7 5% 1/4W	(GX67ES)
R659 ⚠	1-249-393-11	CARBON 10 5% 1/4W	(GX67ES)
R660	1-249-433-11	CARBON 22K 5% 1/4W	(GX67ES)
R661	1-249-405-11	CARBON 100 5% 1/4W	(GX67ES)
		**********	
	* 1-640-125-11	SUR SPEAKER (A) BOARD (GX67ES)	
	* 1-640-126-11	SUR SPEAKER (B) BOARD (GX57ES)	
		**********	
		< CONNECTOR >	
CNP604	* 1-565-295-11	PLUG, CONNECTOR 4P	
		< DIODE >	
D623	8-719-912-20	DIODE 1SS120	
D624	8-719-912-20	DIODE 1SS120	
D625	8-719-912-20	DIODE 1SS120	
D626	8-719-912-20	DIODE 1SS120	
		< RESISTOR >	
R628 ⚠	1-247-747-11	CARBON 470 5% 1/2W F	
R629 ⚠	1-247-747-11	CARBON 470 5% 1/2W F	
		< RELAY >	
RY601	1-515-790-11	RELAY	
RY602	1-515-790-11	RELAY	
		< TERMINAL >	
TM601	1-536-706-00	TERMINAL BOARD (SP) (CENTER, REAR)	(GX67ES)
		**********	
	* A-4341-909-A	TONE BOARD, COMPLETE	
		**********	

Ref. No.	Part No.	Description	Remark
		< CAPACITOR >	
C401	1-130-485-00	MYLAR 0.015uF 5% 50V	
C402	1-130-477-00	MYLAR 0.0033uF 5% 50V	
C403	1-130-486-00	MYLAR 0.018uF 10% 50V	
C404	1-130-489-00	MYLAR 0.033uF 5% 50V	
C405	1-106-224-00	MYLAR 0.15uF 5% 100V	
C451	1-130-485-00	MYLAR 0.015uF 5% 50V	
C452	1-130-477-00	MYLAR 0.0033uF 5% 50V	
C453	1-130-486-00	MYLAR 0.018uF 10% 50V	
C454	1-130-489-00	MYLAR 0.033uF 5% 50V	
C455	1-106-224-00	MYLAR 0.15uF 5% 100V	
		< TERMINAL >	
E401	* 1-535-624-11	TERMINAL, PIN JACK	
		< RESISTOR >	
R401	1-249-438-11	CARBON 56K 5% 1/4W	
R404	1-249-431-11	CARBON 15K 5% 1/4W	
R406	1-249-422-11	CARBON 2.7K 5% 1/4W	
R408	1-249-429-11	CARBON 10K 5% 1/4W	
R409	1-247-903-00	CARBON 1M 5% 1/4W	
R410	1-247-903-00	CARBON 1M 5% 1/4W	
R421	1-249-426-11	CARBON 5.6K 5% 1/4W	
R422	1-249-421-11	CARBON 2.2K 5% 1/4W	
R423	1-249-423-11	CARBON 3.3K 5% 1/4W	
R451	1-249-438-11	CARBON 56K 5% 1/4W	
R454	1-249-431-11	CARBON 15K 5% 1/4W	
R456	1-249-422-11	CARBON 2.7K 5% 1/4W	
R458	1-249-429-11	CARBON 10K 5% 1/4W	
R459	1-247-903-00	CARBON 1M 5% 1/4W	
R460	1-247-903-00	CARBON 1M 5% 1/4W	
R471	1-249-426-11	CARBON 5.6K 5% 1/4W	
R472	1-249-421-11	CARBON 2.2K 5% 1/4W	
R473	1-249-423-11	CARBON 3.3K 5% 1/4W	
		< VARIABLE RESISTOR >	
RV401	1-241-560-11	RES, VAR, CARBON 150K150K	(BALANCE)
RV402	1-241-562-11	RES, VAR, CARBON 100K/100K	(TREBLE)
RV403	1-241-562-11	RES, VAR, CARBON 100K/100K	(BASS)
RV405	1-241-539-11	RES, VAR, CARBON 100K	(INPUT BALANCE)
		< SWITCH >	
S401	1-572-945-11	SWITCH, PUSH (2 KEY) (SOURCE DIRECT, LOUDNESS)	

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
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Ne les remplacer que par une pièce portant le numéro spécifié.

TRANSFORMER TERMINAL(B)

Ref. No.	Part No.	Description	Remark
	* 1-640-138-11	TRANSFORMER TERMINAL (B) BOARD (GX67ES)	
	* 1-640-139-11	TRANSFORMER TERMINAL (B) BOARD (GX57ES)	
		**********	
		< CAPACITOR >	
C986	1-125-676-11	ELECT 10000uF 20% 56V (GX57ES)	
C987	1-125-676-11	ELECT 10000uF 20% 56V (GX57ES)	
		< CONNECTOR >	
CNP953	* 1-564-496-11	PIN, CONNECTOR 3P	
		< DIODE >	
D101	8-719-014-66	DIODE UZP-5.6B	
		< IC >	
IC701	8-749-921-61	IC STK-3082-3 (GX57ES)	
		< RESISTOR >	
R703	1-249-442-11	CARBON 510 5% 1/4W (GX57ES)	
R753	1-249-442-11	CARBON 510 5% 1/4W (GX57ES)	

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TUNER & DOLBY

Ref. No.	Part No.	Description	Remark
	* A-4341-899-A	TUNER & DOLBY BOARD, COMPLETE (GX67ES)	
	* A-4341-915-A	TUNER & DOLBY BOARD, COMPLETE (GX57ES)	
		**********	
		< CAPACITOR >	
C1	1-163-141-00	CERAMIC CHIP 0.001uF 5% 50V	
C2	1-124-477-11	ELECT 47uF 20% 25V	
C3	1-163-021-91	CERAMIC CHIP 0.01uF 10% 50V	
C4	1-163-141-00	CERAMIC CHIP 0.001uF 5% 50V	
C5	1-163-021-91	CERAMIC CHIP 0.01uF 10% 50V	
C6	1-163-021-91	CERAMIC CHIP 0.01uF 10% 50V	
C9	1-163-021-91	CERAMIC CHIP 0.01uF 10% 50V	
C21	1-163-809-11	CERAMIC CHIP 0.047uF 10% 25V	
C22	1-163-021-91	CERAMIC CHIP 0.01uF 10% 50V	
C23	1-124-477-11	ELECT 47uF 20% 25V	
C24	1-123-382-00	ELECT 3.3uF 20% 100V	
C25	1-163-021-91	CERAMIC CHIP 0.01uF 10% 50V	
C26	1-163-019-00	CERAMIC CHIP 0.0068uF 10% 50V	
C27	1-163-117-00	CERAMIC CHIP 100PF 5% 50V	
C28	1-124-903-11	ELECT 1uF 20% 50V	
C30	1-124-903-11	ELECT 1uF 20% 50V	
C31	1-124-463-00	ELECT 0.1uF 20% 50V	
C32	1-124-902-00	ELECT 0.47uF 20% 50V	
C33	1-163-020-00	CERAMIC CHIP 0.0082uF 10% 50V	
C34	1-123-382-00	ELECT 3.3uF 20% 100V	
C35	1-163-020-00	CERAMIC CHIP 0.0082uF 10% 50V	
C36	1-123-382-00	ELECT 3.3uF 20% 100V	
C37	1-124-907-11	ELECT 10uF 20% 50V	
C40	1-124-463-00	ELECT 0.1uF 20% 50V	
C41	1-124-927-11	ELECT 4.7uF 20% 100V	
C42	1-163-021-91	CERAMIC CHIP 0.01uF 10% 50V	
C43	1-126-176-11	ELECT 220uF 20% 10V	
C44	1-163-021-91	CERAMIC CHIP 0.01uF 10% 50V	
C45	1-123-382-00	ELECT 3.3uF 20% 100V	
C46	1-163-013-91	CERAMIC CHIP 0.0022uF 10% 50V	
C48	1-123-382-00	ELECT 3.3uF 20% 100V	
C49	1-163-013-91	CERAMIC CHIP 0.0022uF 10% 50V	
C51	1-124-477-11	ELECT 47uF 20% 25V	
C61	1-163-809-11	CERAMIC CHIP 0.047uF 10% 25V	
C63	1-163-809-11	CERAMIC CHIP 0.047uF 10% 25V	
C81	1-102-961-00	CERAMIC 27PF 5% 50V	
C82	1-102-961-00	CERAMIC 27PF 5% 50V	
C85	1-163-021-91	CERAMIC CHIP 0.01uF 10% 50V	
C86	1-124-477-11	ELECT 47uF 20% 25V	
C87	1-163-021-91	CERAMIC CHIP 0.01uF 10% 50V	
C88	1-163-021-91	CERAMIC CHIP 0.01uF 10% 50V	
C89	1-124-925-11	ELECT 2.2uF 20% 100V	
C90	1-124-463-00	ELECT 0.1uF 20% 50V	
C91	1-163-021-91	CERAMIC CHIP 0.01uF 10% 50V	
C92	1-163-021-91	CERAMIC CHIP 0.01uF 10% 50V	
C93	1-124-477-11	ELECT 47uF 20% 25V	
C301	1-124-907-11	ELECT 10uF 20% 50V	
C302	1-163-109-00	CERAMIC CHIP 47PF 5% 50V	
C303	1-124-907-11	ELECT 10uF 20% 50V	
C304	1-124-907-11	ELECT 10uF 20% 50V	
C305	1-163-109-00	CERAMIC CHIP 47PF 5% 50V	
C306	1-163-093-00	CERAMIC CHIP 10PF 5% 50V	
C307	1-124-927-11	ELECT 4.7uF 20% 100V	
C308	1-163-019-00	CERAMIC CHIP 0.0068uF 10% 50V	
C309	1-163-018-00	CERAMIC CHIP 0.0056uF 5% 50V	
C310	1-163-135-00	CERAMIC CHIP 560PF 5% 50V	
C311	1-124-907-11	ELECT 10uF 20% 50V	
C312	1-163-137-00	CERAMIC CHIP 680PF 5% 50V	
C313	1-164-492-11	CERAMIC CHIP 0.15uF 10% 16V	
C314	1-163-121-00	CERAMIC CHIP 150PF 5% 50V	
C315	1-163-037-11	CERAMIC CHIP 0.022uF 10% 25V	
C316	1-163-141-00	CERAMIC CHIP 0.001uF 5% 50V	
C317	1-124-927-11	ELECT 4.7uF 20% 100V	
C319	1-124-927-11	ELECT 4.7uF 20% 100V	
C320	1-124-903-11	ELECT 1uF 20% 50V	
C321	1-124-768-11	ELECT 4.7uF 20% 50V	
C322	1-163-989-11	CERAMIC CHIP 0.033uF 10% 25V	
C323	1-163-017-00	CERAMIC CHIP 0.0047uF 5% 50V	
C324	1-163-016-00	CERAMIC CHIP 0.0039uF 10% 50V	

Note:
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Replace only with part number specified.

Note:
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Ne les remplacer que par une pièce portant le numéro spécifié.

TUNER & DOLBY

Ref. No.	Part No.	Description			Remark
C325	1-163-833-00	CERAMIC CHIP	0.068uF		25V
C326	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C327	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C328	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C329	1-124-472-11	ELECT	470uF	20%	10V
C330	1-124-927-11	ELECT	4.7uF	20%	100V
C331	1-163-141-00	CERAMIC CHIP	0.001uF	5%	50V
C332	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C333	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C334	1-126-176-11	ELECT	220uF	20%	10V
C335	1-126-176-11	ELECT	220uF	20%	10V
C336	1-126-101-11	ELECT	100uF	20%	16V
C337	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C338	1-124-477-11	ELECT	47uF	20%	25V
C339	1-124-907-11	ELECT	10uF	20%	50V
C340	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C341	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C342	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C343	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C344	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C345	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C346	1-124-927-11	ELECT	4.7uF	20%	100V
C347	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C348	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C349	1-136-171-00	FILM	0.33uF	5%	50V
C350	1-136-171-00	FILM	0.33uF	5%	50V
C351	1-124-907-11	ELECT	10uF	20%	50V
C352	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C353	1-124-907-11	ELECT	10uF	20%	50V
C354	1-124-907-11	ELECT	10uF	20%	50V
C355	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C356	1-163-093-00	CERAMIC CHIP	10PF	5%	50V
C357	1-124-927-11	ELECT	4.7uF	20%	100V
C358	1-136-171-00	FILM	0.33uF	5%	50V
C359	1-136-171-00	FILM	0.33uF	5%	50V
C360	1-136-157-00	FILM	0.022uF	5%	50V
C361	1-136-157-00	FILM	0.022uF	5%	50V
C362	1-136-157-00	FILM	0.022uF	5%	50V
C363	1-136-157-00	FILM	0.022uF	5%	50V
C364	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C365	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C366	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C367	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C368	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C369	1-124-927-11	ELECT	4.7uF	20%	100V
C370	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C371	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C372	1-124-907-11	ELECT	10uF	20%	50V
C373	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C374	1-124-907-11	ELECT	10uF	20%	50V
C375	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C376	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C377	1-124-907-11	ELECT	10uF	20%	50V
C378	1-124-907-11	ELECT	10uF	20%	50V
C379	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C380	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C381	1-124-927-11	ELECT	4.7uF	20%	100V
C382	1-124-927-11	ELECT	4.7uF	20%	100V
C383	1-124-927-11	ELECT	4.7uF	20%	100V
C384	1-124-927-11	ELECT	4.7uF	20%	100V
C385	1-124-477-11	ELECT	47uF	20%	25V
C386	1-124-907-11	ELECT	10uF	20%	50V
C387	1-124-907-11	ELECT	10uF	20%	50V
C388	1-124-907-11	ELECT	10uF	20%	50V
C389	1-124-907-11	ELECT	10uF	20%	50V
C390	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C391	1-124-927-11	ELECT	4.7uF	20%	100V
C392	1-124-927-11	ELECT	4.7uF	20%	100V
C393	1-124-927-11	ELECT	4.7uF	20%	100V
C394	1-124-927-11	ELECT	4.7uF	20%	100V
C395	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C396	1-124-907-11	ELECT	10uF	20%	50V
C397	1-163-093-00	CERAMIC CHIP	10PF	5%	50V
C398	1-163-093-00	CERAMIC CHIP	10PF	5%	50V

< METAL CHIP >

CC301	1-216-295-00	METAL CHIP	0	5%	1/10W

< FILTER >

CF1	1-579-374-71	FILTER, CERAMIC
CF2	1-579-374-71	FILTER, CERAMIC
CF21	1-577-075-11	OSCILLATOR, CERAMIC
CFT21	1-404-853-11	TRANSFORMER, IF (CERAMIC FILTER)

< CONNECTOR >

CNP304 *	1-564-509-11	PLUG, CONNECTOR 6P
CNS1 *	1-573-193-11	CONNECTOR, BOARD TO BOARD 13P
CNS301 *	1-573-193-11	CONNECTOR, BOARD TO BOARD 13P
CNS302 *	1-573-193-11	CONNECTOR, BOARD TO BOARD 13P

< DIODE >

D301	8-719-000-60	DIODE UZL-6M2

< FRONT END >

FE1	1-463-862-11	FRONT END, FM
FE61	1-239-031-11	ENCAPSULATED COMPONENT

TUNER & DOLBY

Ref. No.	Part No.	Description		Remark
		< DIODE >		
D301	8-719-000-60	DIODE	UZL-6M2	
		< IC >		
IC21	8-759-821-45	IC	LA1851N	
IC81	8-759-820-91	IC	LC7218	
IC301	8-759-636-55	IC	M5218AFP	
IC302	8-759-801-01	IC	LC4966	
IC303	8-759-823-63	IC	LV1001M	
IC304	8-759-821-13	IC	LM3364K-15	
IC305	8-759-636-55	IC	M5218AFP	
IC306	8-759-636-55	IC	M5218AFP	
IC307	8-759-801-01	IC	LC4966	
IC308	8-759-512-93	IC	SSM2125	
IC309	8-759-820-11	IC	LC7535	
IC310	8-759-636-55	IC	M5218AFP	
		< COIL >		
L1	1-408-421-00	INDUCTOR	100uH	
L21	1-410-494-11	INDUCTOR	1MMH	
L301	1-408-421-00	INDUCTOR	100uH	
		< FILTER >		
LPF21	1-235-221-00	FILTER, LOW PASS		
		< TRANSISTOR >		
Q1	8-729-230-XX	TRANSISTOR	2SC2669-OY	
Q2	8-729-230-XX	TRANSISTOR	2SC2669-OY	
Q21	8-729-119-78	TRANSISTOR	2SC2785-HFE	
Q22	8-729-119-78	TRANSISTOR	2SC2785-HFE	
Q23	8-729-900-61	TRANSISTOR	DTA114ES	
Q24	8-729-900-80	TRANSISTOR	DTC114ES	
Q81	8-729-900-61	TRANSISTOR	DTA114ES	
Q82	8-729-900-80	TRANSISTOR	DTC114ES	
Q83	8-729-202-67	TRANSISTOR	2SK246-GR3	
Q84	8-729-230-93	TRANSISTOR	2SC3113-AB	
Q301	8-729-900-36	TRANSISTOR	DTC124ES	
Q302	8-729-900-63	TRANSISTOR	DTA124ES	
Q303	8-729-900-36	TRANSISTOR	DTC124ES	
Q304	8-729-900-36	TRANSISTOR	DTC124ES	
Q305	8-729-209-15	TRANSISTOR	2SD2012	
Q306	8-729-900-36	TRANSISTOR	DTC124ES	
Q307	8-729-900-63	TRANSISTOR	DTA124ES	

Ref. No.		Part No.	Description			Remark
			< RESISTOR >			
R1	⚠	1-249-401-11	CARBON	47	5%	1/4W
R3		1-216-037-00	METAL CHIP	330	5%	1/10W
R4		1-216-037-00	METAL CHIP	330	5%	1/10W
R5		1-216-037-00	METAL CHIP	330	5%	1/10W
R6		1-216-079-00	METAL CHIP	18K	5%	1/10W
R7		1-216-037-00	METAL CHIP	330	5%	1/10W
R8		1-216-043-00	METAL CHIP	560	5%	1/10W
R9		1-216-083-00	METAL CHIP	27K	5%	1/10W
R21	⚠	1-249-404-00	CARBON	82	5%	1/4W
R22		1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R23		1-216-049-00	METAL CHIP	1K	5%	1/10W
R24		1-216-085-00	METAL CHIP	33K	5%	1/10W
R25		1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R27		1-216-079-00	METAL CHIP	18K	5%	1/10W
R28		1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R29		1-216-073-00	METAL CHIP	10K	5%	1/10W
R31		1-216-041-00	METAL CHIP	470	5%	1/10W
R32		1-216-073-00	METAL CHIP	10K	5%	1/10W
R33		1-216-073-00	METAL CHIP	10K	5%	1/10W
R36		1-216-073-00	METAL CHIP	10K	5%	1/10W
R37		1-216-109-00	METAL CHIP	330K	5%	1/10W
R39		1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R40		1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R41		1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R42		1-216-109-00	METAL CHIP	330K	5%	1/10W
R44		1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R45		1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R46		1-216-067-00	METAL CHIP	5.6K	5%	1/10W
R47	⚠	1-249-409-11	CARBON	220	5%	1/4W
R61		1-216-097-00	METAL CHIP	100K	5%	1/10W
R62		1-216-089-00	METAL CHIP	47K	5%	1/10W
R63		1-216-009-00	METAL CHIP	22	5%	1/10W
R70		1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R71		1-216-043-00	METAL CHIP	560	5%	1/10W
R72		1-216-049-00	METAL CHIP	1K	5%	1/10W
R73		1-216-035-00	METAL CHIP	270	5%	1/10W
R74		1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R75		1-216-057-00	METAL CHIP	2.2K	5%	1/10W
R76		1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R77		1-216-025-00	METAL CHIP	100	5%	1/10W
R78		1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R79	⚠	1-249-405-11	CARBON	100	5%	1/4W
R81		1-216-049-00	METAL CHIP	1K	5%	1/10W
R82		1-216-049-00	METAL CHIP	1K	5%	1/10W
R83		1-216-049-00	METAL CHIP	1K	5%	1/10W

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

TUNER & DOLBY

Ref. No.		Part No.	Description			Remark
R86		1-216-049-00	METAL CHIP	1K	5%	1/10W
R87		1-216-073-00	METAL CHIP	10K	5%	1/10W
R91		1-216-049-00	METAL CHIP	1K	5%	1/10W
R92	⚠	1-249-401-11	CARBON	47	5%	1/4W
R301		1-216-105-00	METAL CHIP	220K	5%	1/10W
R302		1-216-105-00	METAL CHIP	220K	5%	1/10W
R303		1-216-025-00	METAL CHIP	100	5%	1/10W
R304		1-216-113-00	METAL CHIP	470K	5%	1/10W
R305		1-216-073-00	METAL CHIP	10K	5%	1/10W
R306		1-216-097-00	METAL CHIP	100K	5%	1/10W
R307		1-216-097-00	METAL CHIP	100K	5%	1/10W
R308		1-216-089-00	METAL CHIP	47K	5%	1/10W
R309		1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R310		1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R311		1-216-077-00	METAL CHIP	15K	5%	1/10W
R312		1-216-071-00	METAL CHIP	8.2K	5%	1/10W
R313		1-216-748-11	METAL CHIP	39K	1%	1/10W
R314		1-216-061-00	METAL CHIP	3.3K	5%	1/10W
R315		1-216-089-00	METAL CHIP	47K	5%	1/10W
R316		1-216-121-00	METAL CHIP	1M	5%	1/10W
R317		1-216-073-00	METAL CHIP	10K	5%	1/10W
R318		1-216-105-00	METAL CHIP	220K	5%	1/10W
R319		1-216-073-00	METAL CHIP	10K	5%	1/10W
R320		1-216-073-00	METAL CHIP	10K	5%	1/10W
R321		1-216-073-00	METAL CHIP	10K	5%	1/10W
R322		1-216-089-00	METAL CHIP	47K	5%	1/10W
R323		1-216-077-00	METAL CHIP	15K	5%	1/10W
R324		1-216-089-00	METAL CHIP	47K	5%	1/10W
R325		1-216-077-00	METAL CHIP	15K	5%	1/10W
R326		1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R327		1-216-070-00	METAL CHIP	7.5K	5%	1/10W
R328		1-216-294-00	METAL CHIP	10M	5%	1/8W
R329		1-216-081-00	METAL CHIP	22K	5%	1/10W
R330		1-216-081-00	METAL CHIP	22K	5%	1/10W
R331		1-216-081-00	METAL CHIP	22K	5%	1/10W
R332		1-216-105-00	METAL CHIP	220K	5%	1/10W
R333		1-216-097-00	METAL CHIP	100K	5%	1/10W
R334	⚠	1-249-410-11	CARBON	270	5%	1/4W
R335		1-216-097-00	METAL CHIP	100K	5%	1/10W
R336		1-216-105-00	METAL CHIP	220K	5%	1/10W
R337		1-216-105-00	METAL CHIP	220K	5%	1/10W
R339		1-216-089-00	METAL CHIP	47K	5%	1/10W
R340		1-216-041-00	METAL CHIP	470	5%	1/10W
R341		1-216-073-00	METAL CHIP	10K	5%	1/10W
R342		1-216-109-00	METAL CHIP	330K	5%	1/10W
R343		1-216-109-00	METAL CHIP	330K	5%	1/10W
R344		1-216-065-00	METAL CHIP	4.7K	5%	1/10W
R345		1-216-075-00	METAL CHIP	12K	5%	1/10W
R346		1-216-097-00	METAL CHIP	100K	5%	1/10W
R347		1-216-105-00	METAL CHIP	220K	5%	1/10W
R348		1-216-073-00	METAL CHIP	10K	5%	1/10W
R351		1-216-105-00	METAL CHIP	220K	5%	1/10W
R352		1-216-105-00	METAL CHIP	220K	5%	1/10W
R353		1-216-025-00	METAL CHIP	100	5%	1/10W
R354		1-216-113-00	METAL CHIP	470K	5%	1/10W
R355		1-216-073-00	METAL CHIP	10K	5%	1/10W
R356		1-216-097-00	METAL CHIP	100K	5%	1/10W
R357		1-216-097-00	METAL CHIP	100K	5%	1/10W
R361		1-216-105-00	METAL CHIP	220K	5%	1/10W
R362		1-216-073-00	METAL CHIP	10K	5%	1/10W
R363		1-216-101-00	METAL CHIP	150K	5%	1/10W
R364		1-216-017-00	METAL CHIP	47	5%	1/10W
R365		1-216-105-00	METAL CHIP	220K	5%	1/10W
R371		1-216-105-00	METAL CHIP	220K	5%	1/10W
R372		1-216-073-00	METAL CHIP	10K	5%	1/10W
R373		1-216-101-00	METAL CHIP	150K	5%	1/10W
R375		1-216-105-00	METAL CHIP	220K	5%	1/10W
R386		1-216-105-00	METAL CHIP	220K	5%	1/10W
R387		1-216-105-00	METAL CHIP	220K	5%	1/10W
R388		1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R389		1-216-069-00	METAL CHIP	6.8K	5%	1/10W
R398		1-216-073-00	METAL CHIP	10K	5%	1/10W

< VARIABLE RESISTOR >

RV21	1-238-598-11	RES, ADJ, CARBON 2.2K (FM SEPARATION)
RV23	1-238-604-11	RES, ADJ, CARBON 220K (SIGNAL)
RV24	1-238-601-11	RES, ADJ, CARBON 22K (FM TUNING LEVEL)
RV301	1-241-529-51	RES, ADJ, CARBON 2.2M (SURROUND OUTPUT LEVEL)

< TRANSFORMER >

T21	1-404-954-11	TRANSFORMER, DISCRIMINATOR (NULL)

< TERMINAL >

TM1	1-537-238-21	TERMINAL BOARD (ANTENNA)

< TEST PIN >

TP1	*	1-560-060-00	PIN, CONNECTOR 2P (NULL)

< VIBRATOR, CERAMIC >

X301	1-567-132-00	OSCILLATOR, CERAMIC (8.00MHz)

< VIBRATOR, CRYSTAL >

XT81	1-577-126-11	VIBRATOR, CRYSTAL (7.2MHz)

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

VIDEO

Ref. No.	Part No.	Description	Remark
	* A-4341-902-A	VIDEO BOARD, COMPLETE (GX67ES)	
	* A-4341-917-A	VIDEO BOARD, COMPLETE (GX57ES)	
		**********	
		< CAPACITOR >	
C201	1-124-472-11	ELECT 470uF 20% 10V	
C202	1-124-472-11	ELECT 470uF 20% 10V	
C203	1-124-927-11	ELECT 4.7uF 20% 100V	
C204	1-124-927-11	ELECT 4.7uF 20% 100V	
C205	1-164-097-11	CERAMIC 0.022uF 50V	
C541	1-123-382-00	ELECT 3.3uF 20% 100V	(GX67ES)
C542	1-162-282-31	CERAMIC 100PF 10% 50V	(GX67ES)
C543	1-124-903-11	ELECT 1uF 20% 50V	(GX67ES)
C544	1-124-903-11	ELECT 1uF 20% 50V	(GX67ES)
C545	1-124-903-11	ELECT 1uF 20% 50V	(GX67ES)
C591	1-123-382-00	ELECT 3.3uF 20% 100V	(GX67ES)
C592	1-162-282-31	CERAMIC 100PF 10% 50V	(GX67ES)
C593	1-124-903-11	ELECT 1uF 20% 50V	(GX67ES)
C610	1-124-927-11	ELECT 4.7uF 20% 100V	
C611	1-124-927-11	ELECT 4.7uF 20% 100V	
		< CONNECTOR >	
CNJ201	1-565-319-11	JACK, PIN 2P (VIDEO 1)	
CNJ202	1-565-319-11	JACK, PIN 2P (CIDEO 2 LD, MONITOR)	
CNJ506	1-565-258-11	JACK, PIN 4P (FRONT PRE OUT, FRONT POWER IN)	(GX67ES)
CNJ507	1-565-258-11	JACK, PIN 4P (CENTER OUT, REAR OUT)	
CNP201	1-566-213-11	PIN, CONNECTOR 4P (CONTROL S IN)	(GX67ES)
CNP202	1-566-213-11	PIN, CONNECTOR 4P (CONTROL SOUT)	(GX67ES)
CNP502 *	1-564-507-11	PLUG, CONNECTOR 4P (GX67ES)	
CNP602 *	1-564-506-11	PLUG, CONNECTOR 3P	
CNS201 *	1-568-828-11	SOCKET, CONNECTOR 9P	
		< DIODE >	
D201	8-719-200-82	DIODE 11ES2 (GX67ES)	
D202	8-719-912-20	DIODE 1SS120 (GX67ES)	
D541	8-719-985-35	DIODE HZS2ALL-TA (GX67ES)	
D542	8-719-985-35	DIODE HZS2ALL-TA (GX67ES)	
		< IC >	
IC201	8-759-991-77	IC BA7625	
IC541	8-759-634-50	IC M5218AL (GX67ES)	
		< COIL >	
L201	1-410-521-11	INDUCTOR 100uH	

Ref. No.	Part No.	Description	Remark
		< TRANSISTOR >	
Q201	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q202	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q203	8-729-900-80	TRANSISTOR DTC114ES	(GX67ES)
Q204	8-729-900-80	TRANSISTOR DTC114ES	(GX67ES)
Q205	8-729-141-30	TRANSISTOR 2SC3623A-LK	(GX67ES)
Q206	8-729-900-80	TRANSISTOR DTC114ES	(GX67ES)
Q207	8-729-900-80	TRANSISTOR DTC114ES	
		< RESISTOR >	
R201	1-249-429-11	CARBON 10K 5% 1/4W	
R202	1-249-429-11	CARBON 10K 5% 1/4W	
R203	1-247-804-11	CARBON 75 5% 1/4W	
R204	1-247-804-11	CARBON 75 5% 1/4W	
R205	1-249-403-11	CARBON 68 5% 1/4W	
R206	1-249-403-11	CARBON 68 5% 1/4W	
R207	1-249-405-11	CARBON 100 5% 1/4W	
R208	1-249-405-11	CARBON 100 5% 1/4W	
R209	1-249-405-11	CARBON 100 5% 1/4W	
R210	1-249-405-11	CARBON 100 5% 1/4W	
R220	1-249-429-11	CARBON 10K 5% 1/4W	(GX67ES)
R221	1-249-417-11	CARBON 1K 5% 1/4W	(GX67ES)
R222	1-249-437-11	CARBON 47K 5% 1/4W	(GX67ES)
R223	1-249-409-11	CARBON 220 5% 1/4W	(GX67ES)
R224	1-249-429-11	CARBON 10K 5% 1/4W	(GX67ES)
R225	1-249-393-11	CARBON 10 5% 1/4W	(GX67ES)
R226	1-249-429-11	CARBON 10K 5% 1/4W	(GX67ES)
R227	1-249-437-11	CARBON 47K 5% 1/4W	
R541	1-249-405-11	CARBON 100 5% 1/4W	(GX67ES)
R542	1-249-441-11	CARBON 100K 5% 1/4W	(GX67ES)
R543	1-249-405-11	CARBON 100 5% 1/4W	(GX67ES)
R544	1-249-429-11	CARBON 10K 5% 1/4W	(GX67ES)
R545	1-249-420-11	CARBON 1.8K 5% 1/4W	(GX67ES)
R546	1-249-441-11	CARBON 100K 5% 1/4W	(GX67ES)
R547	1-249-433-11	CARBON 22K 5% 1/4W	(GX67ES)
R548	1-249-425-11	CARBON 4.7K 5% 1/4W	(GX67ES)
R591	1-249-405-11	CARBON 100 5% 1/4W	(GX67ES)
R592	1-249-441-11	CARBON 100K 5% 1/4W	(GX67ES)
R593	1-249-405-11	CARBON 100 5% 1/4W	(GX67ES)
R594	1-249-429-11	CARBON 10K 5% 1/4W	(GX67ES)
R595	1-249-420-11	CARBON 1.8K 5% 1/4W	(GX67ES)
R596	1-249-441-11	CARBON 100K 5% 1/4W	(GX67ES)
R597	1-249-433-11	CARBON 22K 5% 1/4W	(GX67ES)
R598	1-249-425-11	CARBON 4.7K 5% 1/4W	(GX67ES)
R613	1-249-413-11	CARBON 470 5% 1/4W	
R614	1-249-425-11	CARBON 4.7K 5% 1/4W	
R615	1-249-425-11	CARBON 4.7K 5% 1/4W	(GX67ES)

VIDEO

Ref. No.	Part No.	Description	Remark
R616	1-249-413-11	CARBON 470 5% 1/4W	(GX67ES)
R616	1-249-441-11	CARBON 100K 5% 1/4W	(GX57ES)
		< TERMINAL >	
TM601	1-537-238-11	TERMINAL BOARD (REAR SPEAKER)	(GX57ES)
**********			
		MISCELLANEOUS	
		**********	
60	1-575-662-11	WIRE, FLAT TYPE (5 CORE)	
62	1-690-000-11	WIRE, FLAT TYPE (25 CORE)	
107 *	1-575-850-11	WIRE, FLAT TYPE (9 CORE)	
109	1-535-706-11	PLUG, JUMPER	
156 ⚠	1-575-975-11	CORD, POWER	
162	1-690-047-11	WIRE, FLAT TYPE (7 CORE)	
164 *	1-575-847-11	WIRE, FLAT TYPE (5 CORE)	
165	1-690-058-71	LEAD (WITH CONNECTOR) (2 CORE)	
F901 ⚠	1-532-746-11	FUSE, GLASS TUBE 4A 125V	
F902 ⚠	1-532-748-11	FUSE, GLASS TUBE 6.3A 125V	(GX57ES:Canadian)
F902 ⚠	1-532-749-11	FUSE, GLASS TUBE 8A 125V	(GX57ES:US/GX67ES)
F971 ⚠	1-532-746-11	FUSE, GLASS TUBE 4A 125V	(GX57ES)
F971 ⚠	1-532-747-11	FUSE, GLASS TUBE 5A 125V	(GX67ES)
F972 ⚠	1-532-746-11	FUSE, GLASS TUBE 4A 125V	(GX57ES)
F972 ⚠	1-532-747-11	FUSE, GLASS TUBE 5A 125V	(GX67ES)
F973 ⚠	1-532-749-11	FUSE, GLASS TUBE 8A 125V	(US)
F974 ⚠	1-532-749-11	FUSE, GLASS TUBE 8A 125V	(US)
G701 *	4-904-446-01	PLATE, GROUND	
G951 *	4-904-446-01	PLATE, GROUND	
Q701	8-729-209-15	TRANSISTOR 2SD2012	
Q704	8-729-320-71	TRANSISTOR 2SC3856-OY	(GX57ES)
Q704	8-729-320-96	TRANSISTOR 2SC2921-OPY	(GX67ES)
Q705	8-729-320-72	TRANSISTOR 2SA1492-OY	(GX57ES)
Q705	8-729-320-73	TRANSISTOR 2SA1215-OY	(GX67ES)
Q751	8-729-209-15	TRANSISTOR 2SD2012	
Q754	8-729-320-71	TRANSISTOR 2SC3856-OY	(GX57ES)
Q754	8-729-320-96	TRANSISTOR 2SC2921-OPY	(GX67ES)
Q755	8-729-320-72	TRANSISTOR 2SA1492-OY	(GX57ES)
Q755	8-729-320-73	TRANSISTOR 2SA1215-OY	(GX67ES)
T902 ⚠	1-450-535-11	TRANSFORMER, POWER	(GX57ES:US)
T902 ⚠	1-450-536-11	TRANSFORMER, POWER	(GX67ES)
T902 ⚠	1-450-672-11	TRANSFORMER, POWER	(GX57ES:Canadian)

Ref. No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS	
		**********	
	1-465-811-11	COMMANDER, STANDARD TYPE	(GX67ES)
	1-465-812-11	COMMANDER, STANDARD TYPE	(GX57ES)
	1-501-374-11	ANTENNA, LOOP	
	3-707-584-01	COVER, BATTERY	(GX57ES)
	3-753-169-21	MANUAL, INSTRUCTION	(ENGLISH)
	3-753-169-31	MANUAL, INSTRUCTION	(FRENCH) (Canadian)
	4-925-079-01	COVER (6), BATTERY	(GX67ES)
*	4-945-638-01	CUSHION	
*	4-945-639-01	INDIVIDUAL CARTON	(GX67ES)
*	4-945-640-01	INDIVIDUAL CARTON	(GX57ES)
	9-910-999-33	INSTRUCTION	(US)
**********			

HARDWARE LIST

****

#1	7-682-548-09	SCREW +BVTT 3X8 (S)
#2	7-682-548-04	SCREW +BVTT 3X8 (S)
#3	7-685-647-79	SCREW +BVTP 3X10 TYPE2 N-S
#4	7-682-549-04	SCREW +B 3X10
#5	7-621-849-00	SCREW, TAPPING
#6	7-682-561-04	SCREW +BVTT 4X8 (S)
#7	7-685-646-79	SCREW +BTP 3X8 TYPE2 N-S

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

9-956-677-11

Sony Corporation
Audio Group

English
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STR-GX57ES/GX67ES

SONY

SERVICE MANUAL

US Model
Canadian Model

SUPPLEMENT-1

File this Supplement with the Service Manual.

Block Diagram

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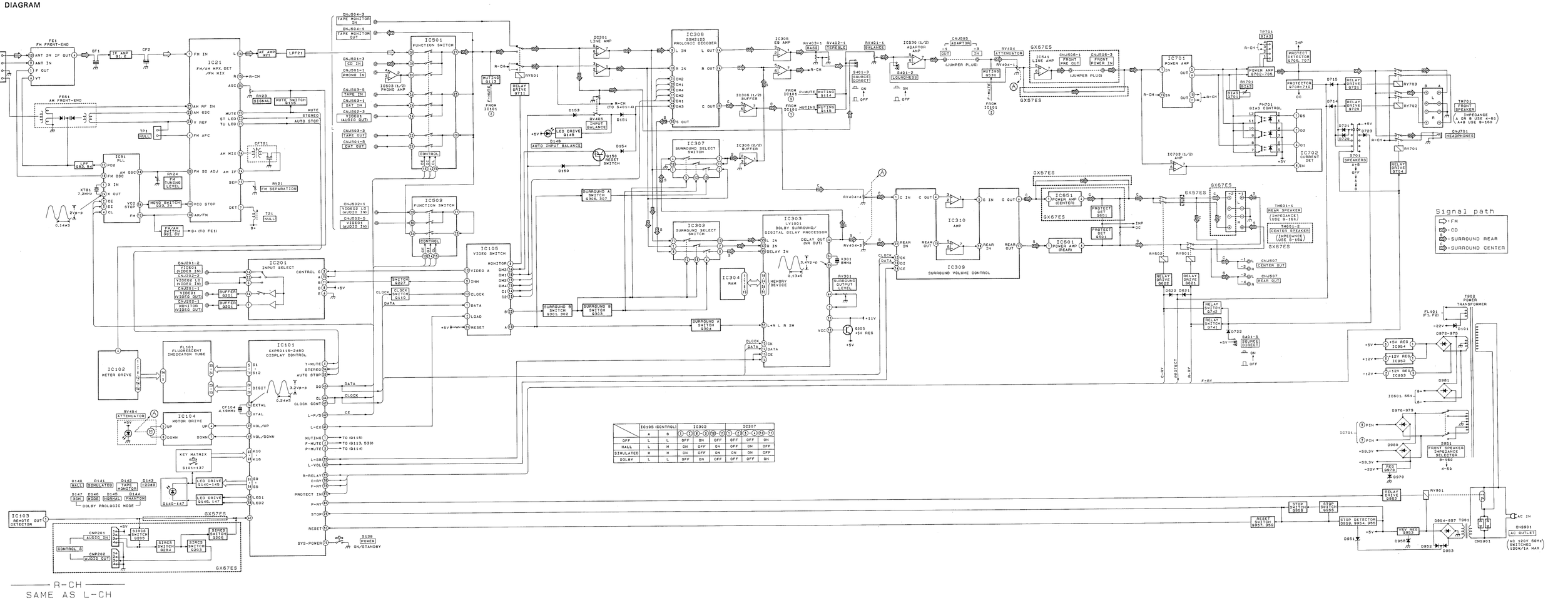
BLOCK DIAGRAM



	IC105 (CONTROL)		IC302				IC307			
	A	B	①	②	⑨	⑩	①	②	⑨	⑩
OFF	L	L	OFF	ON	OFF	OFF	OFF	OFF	ON	
HALL	L	H	ON	OFF	ON	OFF	ON	OFF		
SIMULATED	H	H	ON	OFF	ON	ON	ON	ON	OFF	
DOLBY	L	L	OFF	ON	OFF	OFF	OFF	OFF	ON	